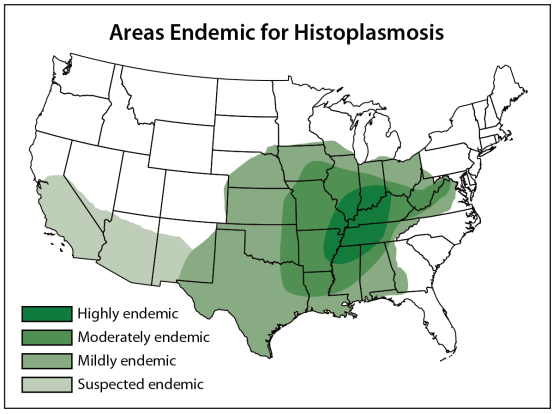
State of Illinois
Illinois Department of Public Health

ENVIRONMENTAL HEALTH
FACT SHEET

Histoplasmosis

WHAT IS HISTOPLASMOSIS?

Histoplasmosis is an infection caused by a fungus, *Histoplasma capsulatum*. The principal habitat for this fungus is soil enriched by the buildup of bird or bat droppings, and in fresh bat droppings. Fresh bird droppings have not been shown to present a health risk for *Histoplasma capsulatum*. In the U.S., the fungus is found most often along the Mississippi and Ohio River Valleys, but it can be found in other parts of the U.S. In people, this uncommon disease affects the lungs and may occasionally affect other parts of the body. Dogs, cats, rats, skunks, opossum, foxes, and other animals also can get histoplasmosis.



Source: Centers for Disease Control and Prevention

WHO GETS HISTOPLASMOSIS?

Anyone can get histoplasmosis. In some areas where the fungus is common, 80 percent or more of the population has been exposed to the fungus by breathing in airborne spores. The initial infection often occurs without causing symptoms, and most persons usually will not develop disease unless the exposure was great.

Elevated risk of exposure to the histoplasmosis fungus include:

- workers who perform demolition or renovation work in buildings where bat or bird droppings have accumulated
- gardeners who use bird or bat droppings as fertilizer
- excavation workers who uproot trees that have been used for bird or bat roosting
- persons cleaning fireplaces below chimneys in which bats or birds have roosted

Long-term smokers and those with preexisting lung disease may be at higher risk for developing the disease. People with severely compromised immune systems — such as those with AIDS or leukemia, persons on steroid therapy, those on chemotherapy, and recent transplant recipients — are vulnerable to a very serious disease known as progressive disseminated histoplasmosis.

WHAT ARE THE SYMPTOMS OF HISTOPLASMOSIS?

The majority of infected persons have no symptoms. When symptoms occur, they vary widely, depending on the form of disease. Acute pulmonary histoplasmosis is a flu-like illness characterized by respiratory symptoms, general malaise, fever, chest pains, and a dry or nonproductive cough. If you have been in contact with bird or bat droppings and have these symptoms, contact your health care provider. Distinct patterns can be seen on chest X-rays.

Chronic pulmonary histoplasmosis is characterized by fever, fatigue, decreased appetite, and a productive cough. It progresses over months or years. Progressive disseminated histoplasmosis, the form that can be seen in people with weakened immune systems, can affect multiple organ systems and is usually fatal unless treated.

HOW SOON AFTER EXPOSURE DO SYMPTOMS APPEAR?

Most people do not experience symptoms. If symptoms occur, they will usually appear within three to 17 days after exposure; the average is 10 days; however, disease onset could occur sooner if exposure is great.

HOW IS THE HISTOPLASMOSIS FUNGUS SPREAD?

The fungus is found throughout the world and grows in soil that has been enriched with bat or bird droppings or in bat droppings themselves. For example, the fungus is common around old chicken houses, in caves and other areas harboring bats, and around starling and blackbird roosts. The fungus produces spores that can become airborne if the soil is disturbed. Inhalation of these spores may cause infection. The disease is not spread from person to person. It is not acquired from animals that have the disease.

WHAT CAN BE DONE TO PREVENT THE SPREAD OF HISTOPLASMOSIS?

The following steps can be taken to reduce exposure to *Histoplasma capsulatum*:

- prevent bats and birds from entering buildings to prevent the buildup of droppings
- avoid areas that may harbor the fungus, particularly those areas with accumulations of bird or bat droppings.
- if cleaning, excavating, or disturbing soil in an area with accumulated bird or bat droppings:
  - minimize exposure to spores in dust by first wetting the area with a low-velocity spray or mist of water before cleaning (a high pressure water stream can cause spores to become airborne before they can be soaked)
  - wear disposable clothing and a properly-fitting N-95 (available at hardware and home improvement stores) or better respirator capable of filtering particles 1 micron in diameter
  - collect and seal wetted material in heavy-duty plastic bags, a 55-gallon drum, or some other secure container for immediate waste disposal
  - keep the respirator on until finished, then walk into a droppings-free area, remove respirator and protective clothing, and place it in a double-sealed plastic bag for waste disposal
  - ensure that people who have compromised immune systems do not clean up areas that may harbor histoplasmosis.

Source: Centers for Disease Control and Prevention

Large accumulations of bird or bat droppings should be removed by a professional cleanup and restoration firm experienced with hazardous waste disposal. For more information, see the Centers for Disease Control and Prevention document *Histoplasmosis, Protecting Workers at Risk* at https://www.cdc.gov/niosh/docs/2005-109/pdfs/2005-109.pdf

DOES PAST INFECTION WITH HISTOPLASMOSIS MAKE A PERSON IMMUNE?

No. You should always take steps to limit exposure to the histoplasmosis fungus, even if you have had histoplasmosis in the past.

HOW IS HISTOPLASMOSIS TREATED?

Mild disease usually resolves without treatment. Severe cases of acute histoplasmosis and all cases of chronic and disseminated disease are treated with specific antifungal medications.

WHERE CAN I GET MORE INFORMATION?

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Printed by Authority of the State of Illinois

IOCI 19-222