

Histoplasmosis (*Histoplasma capsulatum*)

DISEASE IN ANIMALS

Reporting: Animal cases are not required to be reported to Ohio Department of Agriculture or USDA, APHIS Veterinary Services. Voluntary reporting of confirmed animal cases to the [local health department](#) (LHD) is encouraged if there is potential for exposure to the public, or if there is suspected human illness due to a shared environmental exposure.

Transmission: Histoplasmosis is a soil saprophyte and distribution varies with soil moisture, temperature and organic matter. Soils containing accumulations of bat and bird feces are more likely to sustain the organism. Birds do not carry or shed the organism; rather their feces enrich the soil which allows the organism to proliferate. Bats can shed the organism in their feces and seed new areas with histoplasmosis. Animals acquire the infection through inhalation, especially if highly contaminated soils are disturbed.

Clinical signs: Most infections in animals are subclinical. Illness is more often seen in dogs and cats and is characterized by respiratory signs (fever, cough) that usually resolve over several weeks time. Disseminated histoplasmosis can result in hepatosplenomegaly and lymphadenopathy and is characterized by weight loss, diarrhea, chronic cough and anemia.

Diagnostics:

- Histoplasmin skin test: of limited value in acute infections, as animals can remain reactive for years. It is best used in as an indicator of past exposure or for population studies.
- Immunofluorescence: clinical specimens from biopsy or necropsy
- Serology: (CF and immunodiffusion) less useful in animals than humans. H and M bands by immunodiffusion testing aid in differentiating recent or past infection. Serological testing can cross react with blastomycosis and coccidiomycosis. Testing for these other agents should be considered.
- Histology: biopsy or aspiration of affected tissues
- Culture: blood, body fluids or tissues

Case classification:

- Suspected: a clinically compatible case with a recent history of exposure or link to a confirmed case
- Probable: a clinically suspected case with laboratory evidence from a screening or unvalidated test
- Confirmed: a case that meets confirmatory testing criteria determined by a state or federal diagnostic laboratory (e.g. detection of antigen or a 4-fold increase in titer between acute and convalescent serum or isolation of *H. capsulatum*)

DISEASE IN HUMANS

Reporting: Individual human cases of Histoplasmosis are not reportable in Ohio. Outbreaks are required to be reported to the LHD.

Human illness: Most infections are asymptomatic. The acute pulmonary form resembles influenza and produces febrile symptoms that last from days to weeks. Erythema and arthralgia may be present. The chronic pulmonary form is seen in persons >40 years of age, usually with a history of prior pulmonary disease and is clinically similar to pulmonary tuberculosis, causing cavitation. The disseminated form, seen more frequently in Immunocompromised persons, is more serious and may be either acute or chronic. It is characterized by hepatosplenomegaly, pneumonia, mucosal ulceration, fever and prostration.

Personal protection: Transmission is most likely associated with hobby or occupational exposure to contaminated soils (farming, excavating, and demolition). Avoid areas that may harbor the fungus (e.g. accumulations of bird or bat droppings). Minimize exposure to dust in a potentially contaminated environment (i.e. chicken coops and surrounding soil). If exposure to possible *H. capsulatum* contaminated areas are unavoidable, spraying water or oil to reduce dust or a 3% formalin solution on the ground when cleaning potentially contaminated areas may be beneficial. Persons working in such areas should wear disposable cover apparel and a protective face mask capable of filtering out particulate matter larger than one millimicron.

FOR MORE INFORMATION

Disease in Animals

[The Merck Veterinary Manual -Histoplasmosis](#)

Disease in Humans

[ODH Infectious Disease Control Manual](#)
[NIOSH - Histoplasmosis — Protecting Workers at Risk](#)