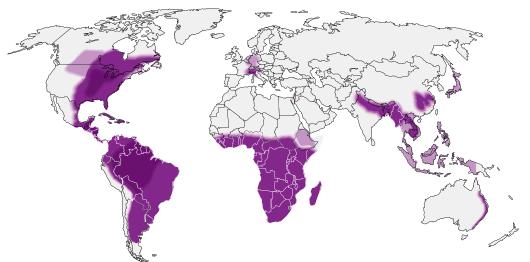
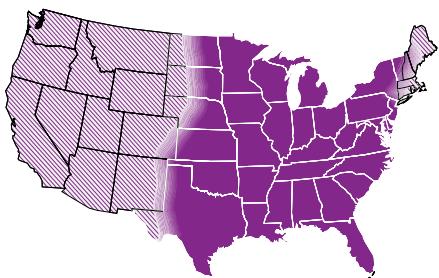


# Community-Acquired Pneumonia (CAP) When to Think Fungus: Histoplasmosis

Accessible version: <https://www.cdc.gov/fungal/diseases/histoplasmosis/diagnosticalgorithms>

## Patient living in or having traveled to a disease-endemic area

(note: although less common, people have acquired disease outside of the shaded regions)



Areas *Histoplasma* is more likely to live

Potential range of *Histoplasma*

These maps are approximations. *Histoplasma* is not distributed evenly and may not be present everywhere within the shaded areas. It may also be present outside of the areas indicated.

**CAP of unknown etiology  
not responding to a course  
of empiric antibiotics**

OR

## Initial CAP visit if:

- Notable exposure to bird or bat droppings (cave or demolition/remodeling exposure; note that many patients do not recall a specific exposure) OR
- Chest X-ray showing new nodules or lymphadenopathy OR
- Link to known histoplasmosis outbreak

## Consider enzyme immunoassay (EIA) urine antigen and immunodiffusion (ID) or complement fixation (CF) serum antibody testing\*

Antigen or antibody positive

Antigen and antibody negative

**Probable acute  
pulmonary histoplasmosis\***

High degree  
of suspicion

Consider alternative  
diagnoses

**Positive**

Retest<sup>†</sup>

Consider consulting infectious  
diseases or pulmonology

**Negative**

Consider alternative diagnoses

\* In the first two weeks of infection, false-negative tests may occur with antigen testing. Depending on availability, serum antibody testing for *Histoplasma* can be considered to increase sensitivity, particularly if clinical suspicion is high; however, a positive serum antibody test may indicate previous infection. Enzyme immunoassay (EIA or ELISA) antigen testing is typically considered first because of a quicker turnaround and higher sensitivity; however, it has a high rate of cross-reactivity with *Blastomyces*. Immunodiffusion and complement fixation antibody tests can be used if EIA is not available or if clinicians want to rule out *blastomycosis* or other fungal diseases.

† Repeat antibody testing, since testing may be negative early in illness, or order sputum or bronchoalveolar lavage (BAL) culture and microscopy.



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<b>Test</b>	<b>Sensitivity</b>	<b>Specificity</b>	<b>Population studied</b>
<b>Antibody tests</b>			
EIA antibody <sup>8</sup>	98%	97% (high cross-reactivity with Blastomyces)	Immunocompromised & healthy populations
Complement fixation (CF) antibody <sup>9</sup>	72%–95%	70%–80%	Adult populations
Immunodiffusion (ID) antibody <sup>9</sup>	70%–95%	100%	Adult populations
<b>Antigen tests</b>			
EIA urine antigen <sup>7</sup>	79%	99%	Adult population, people living with HIV
EIA serum antigen <sup>7</sup>	82%	97%	Adult population, people living with HIV
<b>Other tests</b>			
Culture <sup>10</sup>	15%–85%	100%	Acute or subacute, disseminated disease
Microscopy/histopathology <sup>10</sup>	9%–43%	100%	Acute or subacute, disseminated disease