

# Pneumonia, Fungal

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## BASIC INFORMATION

### Description

Fungal pneumonia is caused by fungal (mycotic) organisms and is often part of a widespread systemic fungal infection.

### Causes

Several fungal organisms can cause pneumonia, including *Coccidioides immitis*, *Blastomyces dermatitidis*, *Histoplasma capsulatum*, *Cryptococcus neoformans* (most common in cats), and *Aspergillus flavus*.

### Clinical Signs

Signs are often indistinguishable from those of other types of pneumonia. Nasal discharge is often seen with lung involvement. Systemic signs are common and include weight loss, fever, lameness, and enlarged lymph nodes. Eye lesions and central nervous system (neurologic) signs can also occur. (See also the specific handouts for the various fungal diseases.)

### Diagnostic Tests

Routine laboratory tests and chest x-rays are often recommended to investigate potential causes of respiratory signs. Chest x-rays may show lung changes consistent with fungal pneumonia. In contrast to other forms of pneumonia, the diagnosis is usually made by identification of the fungal agent on aspirates or biopsies of other tissues or from positive blood tests. Occasionally the diagnosis is made only when samples of exudates are obtained from the

lower respiratory tract using bronchoscopy. Cultures of exudates can be attempted, but the organisms often do not grow.

## TREATMENT AND FOLLOW-UP

### Treatment Options

Antifungal drugs are indicated and must often be continued for weeks to months to effect a cure. Other supportive care for the pneumonia may be started, such as hospitalization for oxygen supplementation, fluid therapy, nebulization, and physiotherapy.

### Follow-up Care

Fungal pneumonia requires close monitoring, especially early in the course of treatment. With severe pneumonias, death of the fungi (which occurs soon after therapy is started) can create a significant amount of inflammation in the lungs. Notify your veterinarian immediately if respiratory signs worsen, especially during the first week that antifungal drugs are administered. Once the pneumonia starts to resolve, the animal usually begins to feel better. Chest x-rays are periodically repeated to monitor progress and response to therapy.

### Prognosis

Many cases resolve as the systemic fungal infection improves. Severe fungal pneumonia has a guarded (uncertain) prognosis, however, because death can occur early in the treatment and long-term therapy is necessary to provide the best chance of recovery. Recurrence is a possibility, even after apparent resolution of the infection.