

# Ettinger & Feldman – Textbook of Veterinary Internal Medicine

## Client Information Sheet

### Aspergillosis

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#### What is aspergillosis?

*Aspergillus* is a type of fungus that is normally present in the environment in soil and organic debris under dark, moist, cool conditions. *Aspergillus* spp. infections (aspergillosis) in small animals occur in two forms: localized and disseminated. Different species of *Aspergillus* are usually responsible for these two types of infections. *Aspergillus fumigatus* is more commonly associated with localized disease (usually in the nasal passages and frontal sinuses), whereas *A. terreus* more commonly causes “disseminated” disease, found in numerous organs.

*Aspergillus* spp. infections are opportunistic, occurring in immunocompromised individuals. Most dogs and cats are resistant to infection by an organism that is normally present in their environment. Dogs and cats diseased from nasal aspergillus probably have a defect in their immune system at the level of the nasal mucosa. Those acquiring disseminated aspergillosis are believed to have a systemic immunodeficiency, which sometimes is believed to have a genetic component because it occurs more commonly in certain breeds.

#### What are the symptoms of aspergillosis?

**Nasal aspergillosis** is characterized by the following:

- Facial pain
- Abnormal nasal discharge (mucoïd to bloody)
- Depigmentation of the nostrils (the nose turns pink or white)
- Crusting sores on the nostrils
- Nosebleeds
- Sneezing
- Loss of appetite

The disease most commonly affects young, male dogs with a medium to long nose (German shepherds, Rottweilers). Plaques of aspergillus fungus colonize and invade the nasal and sinus mucosa, eroding underlying tissue. Untreated, the infection can progress into the central nervous system through the cribriform plate (the division between the nose and the brain), causing neurologic signs such as seizures, and can cause life-threatening nosebleeds.

Dogs with disseminated disease have nonspecific symptoms that can include loss of appetite, weight loss, lethargy, vomiting, diarrhea, coughing, and other problems.

**Disseminated aspergillosis** is a more serious disorder in which fungal organisms spread into vital organs such as the kidneys, liver, spleen, intervertebral discs, and lymph nodes, causing serious systemic illness. German shepherds are most commonly affected.

What tests are needed?

**Nasal aspergillus** is best diagnosed by an endoscopic examination of the nose under anesthesia, with culture and biopsy of affected tissues. A CT scan can be extremely helpful in identifying the extent of disease and determining the best method of treatment. Serology (blood testing) for aspergillus antibodies can be falsely positive or negative. Pets with nasal aspergillosis have a fair prognosis for cure with treatment. Immunosuppression with cortisone or similar drugs should be avoided in these pets.

The diagnosis of **disseminated aspergillosis** is usually made by biopsy and culture of an affected organ.

What treatment is needed?

**Nasal aspergillosis** is most commonly treated with topical antifungal drugs such as clotrimazole, which are infused into the nasal passages and frontal sinuses over 1 hour, while the pet is under a general anesthetic. Systemic (oral) antifungal drugs may be used also but generally are not as effective as topical therapy. Sometimes numerous topical treatments are necessary.

**Disseminated aspergillosis** can be treated aggressively with intravenous antifungal drugs, followed by oral antifungal drugs if a response to therapy occurs, but this disease is usually progressive and fatal.

Contacts for Further Information



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