

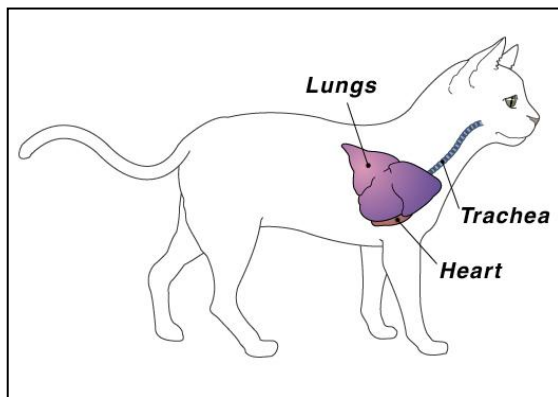
BRIARPOINTE VETERINARY CLINIC

47330 Ten Mile Road
Novi, MI 48374
(248) 449-7447

Ronald A. Studer, D.V.M., L.P.C. John S. Parker, D.V.M.

ASTHMA AND BRONCHITIS

Obstructive and allergic lung diseases affect many cats and are sometimes called “asthma,” “bronchitis,” or “bronchial asthma.” Unfortunately, these diseases are not easily classified and probably represent a variety of lung disorders. They do share a common finding of “hyper-responsive” or “over-reactive” airways. These diseases are similar, but not identical to what occurs in humans.



When the airway of a cat is sensitive to certain stimuli, exposure to these agents leads to *narrowing of the airways*. The inciting agents are usually direct irritants to the airways or things that provoke an allergic response in the respiratory tract. Regardless of the cause, the end-result is the same: muscle spasms in the bronchi (breathing tubes), buildup of mucus, and accumulation of cellular material. The inability to clear the bronchi of this material leaves the cat susceptible to secondary infections.

With obstructive lung disease, the cat experiences the greatest breathing difficulty during *expiration* or breathing out. . Air may become effectively trapped in the lungs, causing them to over inflate. In some cases, this trapping leads to development of emphysema in the cat.

Are some cats more likely to get asthma?

Obstructive lung disease is most common in cats from two to eight years of age. Siamese cats seem to be at higher risk for developing asthma and bronchitis. Some reports indicate that it is more common in female cats. Obese and overweight cats also seem to be at greater risk for developing respiratory disorders.

What are the clinical signs?

Coughing and respiratory distress are the most commonly reported signs with obstructive lung disease. Coughing is a significant finding since there are relatively few causes of coughing in the cat. Many cats assume a squatting position with the neck extending during these coughing episodes. Wheezing is easily heard with the stethoscope and is sometimes so loud that it can be heard by the owners. Occasionally, sneezing and vomiting are noted.

Any episode of open-mouth breathing in cats should be a cause for concern and you should inform us immediately if this occurs.

What causes asthma?

As mentioned above, this group of diseases is characterized by hyper-responsive airways. The small breathing tubes called *bronchi* and *bronchioles* can react to a number of stimuli, such as:

Inhaled debris or irritants - dust from cat litter, cigarette smoke, perfume or hairspray, carpet fresheners, and perfumes in laundry detergent

1. Pollens or mold
2. Infectious agents - viruses, bacteria
3. Parasites - heartworms, lungworms

How is asthma diagnosed?

Several tests may be performed to diagnose allergic lung disease in the cat.

The **minimum diagnostic tests** include a complete blood count (CBC), blood chemistries, fecal exam and urinalysis. These tests will assess the general health of the cat and may provide clues as to the underlying cause. One particular type of white blood cell, the eosinophil, is commonly associated with allergic events and may provide support for a tentative diagnosis of asthma. Also, in some cats, special tests will be performed on stool samples for evidence of lungworms.



Heartworm test –Heartworm disease is endemic in our area. Even cats that are indoors are susceptible to Heartworm disease.

Feline leukemia and feline immunodeficiency virus tests – These tests are helpful in determining the overall health of the cat.

The mucus can be examined under a microscope (cytology). Finally, a small amount of sterile saline can be flushed into the airways to retrieve samples of material from deep in the lung. This material can be cultured for micro-organisms and can also be carefully studied under the microscope. The sediment can be evaluated for evidence of lungworms.

In some cases, an underlying cause cannot be identified, despite a complete and thorough diagnostic workup. Even when the underlying cause is not identified, most cats can achieve a reasonable quality of life with medical management.

Thoracic radiography (chest X-ray) – Characteristic changes in the lungs are common on x-rays. Also, x-rays can be suggestive of heartworms or other types of heart and lung disease.

Bronchoscopy, cytology and airway lavage (washing) – Bronchoscopy is a procedure that allows the endoscopist to look down the airways of the anesthetized cat with a fiberoptic scope. After a visual examination of the airway is completed, the lining mucus of the bronchi may be sampled with a small brush.

Some owners decline the complete workup for a variety of reasons. In such cases, it may be acceptable to treat the cat with a course of corticosteroids (“cortisone” or “steroids”) since most asthmatic cats respond favorably to these medications with few side effects. However, this approach may create two problems. Corticosteroids can worsen secondary bacterial infections; therefore, prophylactic antibiotics are reasonable in cases where a workup cannot be performed. Cats with heartworms often cough like cats with asthma and will respond temporarily

to corticosteroids. Therefore, cats in locations where heartworms are common in dogs may be misdiagnosed as having asthma.

How is asthma treated?

Successful management of allergic lung disease employs one or more of the following therapies.

Avoidance – Any factors known to trigger or aggravate breathing problems should be avoided. In some cases, this may mean trying different brands of cat litter, eliminating cigarette smoke from the home, etc. The previous list (see “Causes”) details some factors that should be considered. It is important to pay close attention to environmental factors that may aggravate the condition.



Bronchodilators – These drugs are used to open up the airway and allow the cat to move air more freely. They should be used faithfully and as directed to obtain maximum effect.

Corticosteroids – Steroids have a beneficial effect on decreasing inflammation, dilating the airway, and decreasing mucus production. In many cats, they are given daily. When the cat’s temperament is a concern, long-acting injections can be given as an alternative to pills. These drugs have potential for some side effects and should not be withdrawn abruptly.

Emergency treatment may employ bronchodilators, oxygen, rapid-acting glucocorticoids, and epinephrine. If your cat has heart disease, the attending veterinarian should be advised since epinephrine is best avoided.

Will my cat recover?

Cats with obstructive lung disease are usually manageable. Sometimes a “cure” may be achieved if a specific underlying cause can be identified and treated.

Extreme respiratory distress constitutes an emergency and the cat should receive immediate attention.