



**Ettinger: Textbook of Veterinary Internal
Medicine, 7th Edition
Feline Asthma
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What is feline asthma?

Feline "asthma" and feline bronchial disease are respiratory conditions that are encountered frequently in cats. These disorders can be responsible for chronic coughing, wheezing, loud or rapid breathing, and loss of play activity. In severe cases life-threatening respiratory distress may occur. The disease syndrome is associated with activation of inflammation (irritation) in the lungs in response to irritants or allergens in the environment. The cells in the lung respond to the insult by increasing the production of mucus and triggering constriction (narrowing) of small airways. These responses lead to symptoms in affected cats.

In most cats, the cause of disease goes unrecognized; however, "trigger events" and environmental history should be investigated. In particular, exposure to smoke-contaminated rooms, aerosol sprays or cleaners, and dusty or perfumed litter should be considered; recent upper respiratory infection with sneezing or nasal discharge could also be important.

What are the symptoms of feline asthma?

Bronchial disease can affect any age of cat, and the most common symptoms include the following:

- Coughing-episodes of coughing can resemble vomiting or may be confused with the attempted expectoration of a hairball
- Loud breathing sounds or wheezing noises
- Rapid breathing and/or panting
- An "asthmatic attack" with acute respiratory distress and open mouth breathing - this situation can also be encountered in previously stable or medicated cats, and it requires immediate veterinary care

What tests are needed?

The first and most important source of information is finding out as much as possible about your cat by talking with you, the owner. Physical examinations can be helpful in identifying the cause of respiratory disease, since lung sounds are usually harsh or wheezy in cats with bronchial disease. Additional tests are usually required to determine the cause of respiratory problems, to assess the severity of disease, and to decide on specific therapy.

These diagnostic tests may include the following:

- Basic blood tests, to evaluate general health.
- More specific blood tests can rule out primary infections that could trigger airway inflammation and to rule out other conditions that might mimic asthma.
- In some areas of the country, heartworm disease must be investigated through use of blood tests or echocardiograph.
- Lungworm infection in cats can also mimic asthma, and a specific stool test on fresh, unrefrigerated feces must be performed to diagnose this condition.
- Chest x-rays in cats with asthma or bronchitis often show thickened airway walls but they can appear normal even in a severely affected cat.
- Collection of fluid from within the airways with a tracheal wash may also be useful. Your veterinarian may elect to anesthetize your cat briefly, place a tube into the airways, and inject a small volume of fluid into the lungs to "wash" cells from the airways. This fluid can be evaluated for the presence of bacteria or parasites that might trigger airway inflammation. The type of cells present in the lung can also be assessed. Typically, inflammatory cells such as eosinophils and/or neutrophils are present in abnormal numbers if a cat has bronchial disease.

What is the treatment?

When infectious or parasitic causes of cough have been ruled out, and a primary inflammatory condition is considered most likely, treatment with steroids (prednisone or prednisolone) is generally employed for treatment of asthma or bronchitis. Oral medications are well tolerated by most cats. A high dose of steroids is used early in disease, and the dosage is gradually decreased as the cough resolves. It is important to keep in contact with your veterinarian regarding your cat's response to medication, because every animal requires a different type or amount of drug. Some cats can be removed from medication, but many require some amount of steroid daily or every other day for the rest of their life.

In cats that suffer severe "asthma attacks" or in cats that don't respond fully to steroids, bronchodilators such as theophylline or terbutaline may be required to control signs. These drugs often must be obtained from a human pharmacy. Sustained-release theophylline is usually given once daily in the evening and terbutaline is usually given twice daily. In some cats, vomiting, diarrhea, loss of appetite, or hyperexcitability can occur with use of these drugs, but these are generally controlled with lowering of the dosage. These drugs can be required life-long or may be given for only a short period of time. Be sure to consult with your veterinarian before discontinuing medication.

In cats that cannot be given pills by mouth, use of inhaled medications can be extremely helpful in controlling disease. Metered-dose inhalers (MDIs) used in human medicine can be used in cats when a dispensing chamber and facemask are employed, as is commonly done in young children. MDIs contain medication and propellant within a small steel canister and plastic shield. The MDI must be well shaken prior to use. Pressing onto the top of the MDI actuates the propellant, resulting in release of a fast-moving spray of medication. To transmit the medication into the lungs of the cat, the

MDI must be actuated into a pediatric spacer attached to a facemask. With the facemask enclosing the lips and nose of the cat, one puff of drug is administered, and the cat inhales 8 to 10 breaths to pull the medicine into the lungs. Steroids and bronchodilators can be administered through this route. Medication may be required 1 to 4 times per day, and in cats with severe clinical signs, use of oral medication may also be required for the first several weeks of treatment.

Although this method is more expensive than oral treatment, it can provide excellent control of symptoms. MDI is likely the best method of treatment for a cat that should not receive oral or injectable steroids, such as the cat with diabetes or viral infection.