



## Peak Veterinary Specialists

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### **FELINE ASTHMA**

#### **WHAT IS ASTHMA?**

Asthma is a respiratory disease that occurs when the lung airways (bronchi) constrict, either spontaneously or in response to foreign substances such as dust or smoke, impeding airflow into the lungs. Excess mucus forms and airway linings swell with inflammation. This airway constriction leads to the inability to draw a deep breath, intolerance to exercise, coughing, and musical sighing sounds called wheezing.

Not all of these signs may be observed; sometimes a low grade chronic cough is the only sign. It should be remembered that an acute asthmatic crisis can arise at any time and can represent a life-threatening event. Because of the constricted airways, the actual volume of air that can move in and out of the lungs with each breath is reduced. There is often a great deal of effort seen in the cat's breathing. The abdomen appears to be working to push air out and the breaths are shallow and rapid. The cat may even be breathing with its mouth open in an effort to move the largest possible amount of air.

#### **HOW IS THE DIAGNOSIS MADE?**

The diagnosis of feline asthma is confirmed by a chest radiograph. The cat may be in too much distress for this procedure initially. Classically, this radiograph will show what is called air-trapping. This means that the small airways have constricted such that inhaled air cannot be exhaled. The lungs are larger in appearance than normal as they are over-inflated and the diaphragm may seem flattened. Inflammation and mucus build up within the airways causes their walls to appear thickened in the radiograph. The terms used for such airway appearance are doughnuts or tramlines. You may hear your veterinarian use these terms and they are classical findings in airway disease.

Some asthmatic cats have normal radiographs. Procedures such as a tracheal wash or bronchoalveolar lavage retrieve cells from the lower respiratory tract that may be helpful in making the diagnosis. An examination of the fluid under the microscope and bacterial cultures will help make the diagnosis of asthma and/or rule-out bacterial or parasitic infections or even cancer.

#### **TREATMENT**

The initial treatment may include oxygen administration, a bronchodilator medication, and anti-inflammatory drugs such as prednisone. Once the crisis is controlled, oxygen may be discontinued. Usually prednisone is continued for life to reduce the inflammation and prevent lung scarring, however, long term use has been associated with the development of diabetes mellitus in cats. Recently, the use of steroid inhalers has replaced the use of oral or injectable prednisone. Because the drug is delivered locally to the airways, side effects are minimal. It is also important to identify and eliminate any triggers of the asthma such as smoke, dust (kitty litter), aerosols, etc.

## **OTHER TREATMENT OPTIONS**

Other medications that might be helpful include:

**Airway Dilators:** Terbutaline and theophylline are airway dilators commonly used in the management of asthma.

**Antihistamines:** Histamine is an inflammatory substance released during allergic response. Histamine has been thought to be involved in the airway constriction mechanism and antihistamines may help some asthmatic cats.

**Cyproheptadine:** One of the biochemicals involved in the asthma inflammation cascade is called serotonin. It is directly involved in constriction of the airways in cats. Cyproheptadine is an anti-serotonin medication with concurrent antihistamine properties. It is often used in cats who need extra help beyond steroids or who are having problems that preclude steroid use. Side effects of cyproheptadine include increased appetite and tranquilization.

**IT IS IMPORTANT TO REALIZE THAT ASTHMA CAN CULMINATE IN A RESPIRATORY CRISIS THAT CAN BECOME LIFE-THREATENING IF IGNORED.**

If your cat begins to pant or if you see excessive abdominal movement during respiration and the cat is not purring, you may have an emergency situation. Contact your veterinarian immediately.