

## Chronic Bronchitis and Lower Airway Disease in Dogs

When a mature dog presents with cough and a heart murmur, the biggest challenge can be to determine whether the cough is due to congestive heart failure, left main-stem bronchus compression from an enlarged left atrium, chronic pneumonia or lung cancer.

The diagnostic approach to chronic cough involves a thorough history and physical exam, chest radiographs and a heartworm test if the dog is not on heartworm preventative. This may be complimented by the information obtained through an echocardiogram (heart ultrasound) and cardiac biomarkers. Finally, your pet may be referred to an internal medicine specialist to perform a bronchoalveolar lavage (BAL). This procedure is performed under a short general anesthesia and it allows collection of fluid and cells from your dog's lungs as a flexible, fiberoptic camera is passed into your dog's airways and lungs. Sometimes a successful therapeutic trial of medications can be suggestive of a diagnosis.

Chronic bronchitis is a disease in dogs affecting the smaller airways that branch out from the trachea (windpipe). These branches, called bronchi and bronchioles, allow the transport of air into and out of the alveoli, the sites of oxygen exchange.

Chronic bronchitis (long duration, usually more than two to three months) is associated with inflammation and swelling of the walls of the bronchi resulting in narrowing of the airways and obstruction or blockage of airways by plugs of mucus or other secretions. Bronchitis may also be caused by bacterial infections, hypersensitivity disorders (allergies), parasites (i.e., lung worms, heartworm) or chronic inhalation of airway irritants (second-hand smoke, dusts, exhaust fumes, etc.).

The most common signs of chronic bronchitis include coughing, difficulty breathing or wheezing.

Therapy often involves a combination of medications. It often includes anti-inflammatory corticosteroids either in an inhalant or oral form, anti-tussives, antibiotics and weight loss.