

# Bronchitis, Chronic

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## BASIC INFORMATION

### Description

Chronic bronchitis is inflammation or irritation of the small airways (bronchioles) and medium-sized airways (bronchi) in the lungs that lasts for longer than 2 months. Chronic bronchitis is associated with a cough that may persist indefinitely, because the cause may never be identified. Pathologic changes (damage from the inflammation) to the airways are irreversible in most cases.

### Causes

Usually, the cause is not determined. Chronic bronchitis may be related to inhaled irritants (smoke, dust, fumes), allergies, or chronic infections. In rare cases, it is caused by a congenital abnormality of the airways (primary ciliary dyskinesia) that prevents them from clearing inhaled substances. Pneumonia and tumors do not often cause bronchitis alone; they usually also involve the lungs.

### Clinical Signs

Most dogs with chronic bronchitis are middle-aged or older small-breed dogs that are overweight. A chronic, persistent, moist or dry cough is the main sign. Generally the dog's overall health is good. Exercise intolerance may be noted in some dogs. Episodes or spasms of coughing and difficulty breathing may be noted in some instances. Signs may worsen with excitement, stress, exposure to irritants in the air, and secondary infections.

### Diagnostic Tests

The diagnosis is often made by excluding other potential causes of chronic coughing, such as heart disease, tumors, pneumonia, collapsing trachea, and other airway problems. X-rays of the lungs may reveal certain changes consistent with a chronic bronchitis. X-rays are also helpful in ruling out other causes of coughing. Laboratory tests may be recommended to look for evidence of infections, allergies, and other conditions.

Analysis of secretions taken from the trachea and bronchi during a transtracheal wash may help determine a cause. Culturing of the secretions may demonstrate bacteria associated with chronic infections of the respiratory tract, such as mycoplasmosis. Bronchoscopy, which involves the passage of a fiberoptic scope into the airway, may help eliminate parasites, foreign bodies, a collapsing trachea,

or tumors as potential causes. Other tests may be recommended to rule out other diseases that can cause a chronic cough.

## TREATMENT AND FOLLOW-UP

### Treatment Options

Because the cause is not often identified, symptomatic treatment is usually begun. If a cause is found, therapy is also directed at the cause. Potential therapies include the following:

- Obese dogs benefit greatly from a weight-reduction plan.
- Environmental irritants, such as smoke, dust, heat, and low humidity, should be eliminated.
- Humidifiers can be used intermittently while the dog is confined to a small space.
- Antibiotics are used if an infection is suspected or confirmed.
- Cough suppressants may be recommended if no infection is present.
- Drugs used to dilate the bronchioles may help reduce some clinical signs, such as exercise intolerance, breathing difficulty, or wheezing.
- A short course of corticosteroids can be helpful in some cases to decrease the amount of inflammation in the airways; however, they are used cautiously and in situations where the bronchitis is not complicated by respiratory infection, heart disease, or infection elsewhere in the body.

### Follow-up Care

Lifelong therapy is usually required to control or minimize the clinical signs. If the disease is not treated adequately, the inflammation usually worsens, so recheck visits and repeated x-rays and testing may be needed to monitor response to therapy. Repeat testing may also be needed if signs flare up and do not respond to the usual therapy. Notify your veterinarian if any signs recur or worsen.

### Prognosis

Complete recovery from chronic bronchitis is not a realistic goal, and owners should be prepared for lifelong therapy for their affected pet. Adequate, consistent therapy allows many affected animals to have a good quality of life. It is important that owners comply with prescribed therapies. If an infection is part of the disease, it usually responds to antibiotics, but they may need to be administered for some time.