

# Canine Infectious Respiratory Disease Complex (Kennel Cough)

## ABOUT THE DIAGNOSIS

Canine infectious respiratory disease complex (CIRDC) is a combination of clinical signs caused by one or more contagious respiratory pathogens (germs); the complex is better known as “kennel cough” and may also be called “contagious tracheobronchitis”. There are many bacterial and viral pathogens that contribute to CIRDC (see list). If any one of these damages the airways, it sets up the opportunity for other CIRDC pathogens, or for ordinary bacteria, to cause a secondary infection that can be quite serious.

Just as for people with contagious respiratory infections (e.g., the common cold, influenza), most infected dogs will recover from their illness with or without treatment. Just as people are more likely to pick up a cold from school or work, dogs are more likely to pick up infections when they are exposed to other dogs. This might be at an animal shelter, a boarding kennel, a groomer, doggie-daycare, a dog park, or even at a veterinary clinic. A variety of factors makes infection after exposure more or less likely (vaccination status, age, stress levels, etc.). Although CIRDC is highly contagious between dogs, it is not contagious to people.

Clinical signs are similar for infections with any of the common pathogens that cause CIRDC. The most common symptom is coughing, which might be severe and can last for weeks. Other common signs include runny nose, runny eyes, poor appetite, and lethargy. Some of the pathogens cause other signs. For instance, distemper virus can cause vomiting and diarrhea, muscle twitching, or even seizures. While most cases of CIRDC will resolve on their own, dogs can develop severe illness and secondary lung infections. If this happens, pneumonia can cause difficulty breathing or can even lead to death.

Common pathogens contributing to CIRDC:

*Bordetella bronchiseptica*  
Canine adenovirus  
Canine distemper virus  
Canine herpesvirus  
Canine influenza virus  
Canine parainfluenza virus  
Canine respiratory coronavirus  
*Mycoplasma cynos*  
*Streptococcus equi*

## LIVING WITH THE DIAGNOSIS

Your veterinarian will probably suspect CIRDC based on your dog’s recent history and physical examination. If typical respiratory signs occur shortly after boarding or another easily recognized source of exposure, or if your veterinarian is aware that there has been a recent rash of CIRDC in the area, there may be no need for additional testing. On the other hand, if your dog is more ill than expected or if there is a reason to suspect a secondary pneumonia, a variety of blood tests, x-rays, or even an airway wash might be suggested.

## TREATMENT

There is no specific medicine used for treating kennel cough, and most dogs will recover even if they are not treated with any medications. Unless your dog is so ill that intravenous fluids or extra oxygen are required, treatment will be done at home. It is very important that you keep your sick dog away from all others because these infections are quite contagious between dogs. Viral infections must run their course, and they do not respond to antibiotics. That said, your veterinarian might prescribe antibiotics either because

he or she suspects a bacterial pathogen instead of a virus, or to prevent/treat secondary bacterial infections. As long as there is no sign of pneumonia, your veterinarian might also prescribe cough suppressants to make your dog more comfortable. Cough suppressants don’t stop the cough completely, and they might make your dog drowsy. Cough suppressants must be avoided if your dog develops complications of infection such as pneumonia.

It is likely that your dog will not feel like eating or drinking as much as normal while they recover. Make sure there is always clean water available, and offer tempting canned food for several days. Avoid using a neck collar because that can start a coughing spell. Basically, your dog needs tender loving care (TLC) as their body fights off the infection, much as you would need TLC while fighting off a cold or flu. In most cases, your dog will be feeling better in a week or so, although the cough may linger for a few weeks longer than that.

## DOs

- Pay attention to your dog’s breathing. It should not appear labored or fast.
- Let your dog rest. This is not the time for long walks or a jog.
- Make sure that your dog has plenty of fresh water and tempting food.
- Ask your veterinarian if you should monitor your dog’s temperature at home.
- Humidification can be helpful if your dog is congested. Allowing your dog to lie on the floor when you take a hot shower might help ease their congestion.
  - Talk to your veterinarian about a vaccine for your dog to decrease the chance of contracting kennel cough if you know that your dog will be exposed to new dogs in the future (boarding in a kennel, attending dog shows, etc.).
  - Observe your dog closely if you are giving a cough medicine that can cause drowsiness or that can cause anxiety. If this is the case, contact your veterinarian to determine whether the dosage should be changed or a different medication substituted.
  - Give medication only as directed.

## DON'Ts

- Don’t give medications unless they are prescribed or approved by your veterinarian. Many medications made for people can be dangerous for dogs.
- Don’t use a neck collar.
- Don’t allow your dog to be around other dogs for several weeks after infection. Not only can your dog pass on the infection, but your dog will be more likely to catch something else from the other dog while his/her own body is run down.
- Don’t expect that antibiotics will cure the disease. Just as with the common cold, in most cases the infection should resolve on its own and antibiotics could cause more harm than good.

## WHEN TO CALL YOUR VETERINARIAN

- Call if you notice that your dog is having any trouble breathing – too fast, too slow, funny noises, or anything else concerning should prompt a call.
- Call if your dog refuses to drink for more than a day or refuses food for more than two days.
- Call if your dog becomes markedly listless or very depressed, refusing to walk about the room.

- Call if the coughing is interfering with your dog's ability to rest.
- Call if your dog's symptoms seem to be getting worse instead of better after a few days.
- If you observe any signs of an adverse reaction to the medication, such as hives (bumps under the skin), weakness, vomiting, diarrhea, anxiety, or drowsiness.
- If you are having difficulty giving the medication to your dog.

### **SIGNS TO WATCH FOR**

- Rapid or labored breathing
- Refusal to drink or eat
- Worsening cough or lethargy

### **ROUTINE FOLLOW-UP**

- If symptoms improve, there is likely no need for a follow-up visit. At your next regularly scheduled appointment, discuss if any changes to your dog's vaccination protocol might be warranted.

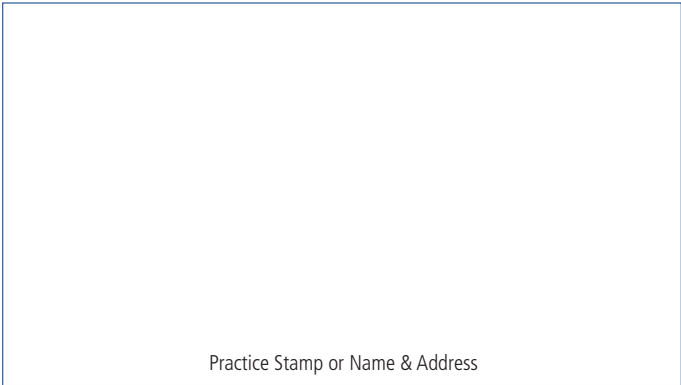
### **ADDITIONAL INFORMATION**

There are vaccinations that prevent some, but not all, of the infections that cause CIRDC. Vaccines can help prevent (or reduce severity of illness if infection does occur) distemper virus, adenovirus, parainfluenza virus, influenza virus, and *Bordetella bronchiseptica*. Some of these vaccines are considered "core", meaning that every dog should receive that vaccine (for example, distemper virus is a core vaccine). Most of the vaccines are considered "non-core", or optional. The decision as to whether to use these vaccines depends on a number of factors, including your dog's risk of exposure.

Vaccines come in different forms. Many of the different respiratory vaccines are bundled together, while others protect from just one pathogen. Some are given by injection, while others are given in the nose or mouth. Some must be repeated every year, while others are given only every three years.

*Other information that may be useful: "How-To" Client Education Sheets:*

- How to Count Respirations and Monitor Respiratory Effort
- How to Take an Pet's Temperature
- How to Administer Oral Medications
- How to Provide Home Respiratory Therapy (Humidification, Nebulization, Coupage)



Also available in Spanish.