

## Bordetella and the Bordetella Vaccine

**Kennel Cough** in dogs will stimulate a coarse, dry, hacking cough about three to seven days after the dog is initially infected. It sounds as if the dog needs to "clear it's throat" and the cough will be triggered by any extra activity or exercise. Many dogs that acquire Kennel Cough will cough every few minutes, all day long. Their general state of health and alertness will be unaffected. They usually have no rise in temperature, and do not lose their appetite. The signs of Canine Cough usually will last from 7 to 21 days and can be very annoying for the dog and the dog's owners. Life threatening cases of Kennel Cough are extremely rare and a vast majority of dogs that acquire the infection will recover on their own with no medication. Cough suppressants and occasionally antibiotics are the usual treatment selections.

### WHAT IS KENNEL COUGH?

Actually, clinical cases of Kennel Cough are usually caused by several infectious agents working together to damage and irritate the lining of the dog's trachea and upper bronchi. The damage to the tracheal lining is fairly superficial, but exposes nerve endings that become irritated simply by the passage of air over the damaged tracheal lining. Once the organisms are eliminated the tracheal lining will heal rapidly. The most common organisms associated with Canine Cough are the bacteria called *Bordetella bronchiseptica* and two viruses called Para influenza virus and Adenovirus and even an organism called *Mycoplasma*.

### HOW IS IT TRANSMITTED?

The causative organisms can be present in the expired air of an infected dog, much the same way that human "colds" are transmitted. The airborne organisms will be carried in the air in microscopically tiny water vapor or dust particles. The airborne organisms, if inhaled by a susceptible dog, can attach to the lining of the trachea and upper airway passages, find a warm, moist surface on which to reside and replicate, and eventually damage the cells they infect. Your pet can catch Kennel Cough anywhere another infected dog could have been.

### HOW IS IT PREVENTED?

Many dogs, exposed to all sorts and numbers of other dogs, will never experience the effects of Canine Cough. Some dog owners prefer to take advantage of the current vaccines available that are quite effective in preventing the disease. Usually these dog owners will have to board, show, field trial, or otherwise expose their dog to populations of other canines. Since the chances of exposure and subsequent infection rises as the dog comes in close proximity with other dogs, the decision to vaccinate or not to vaccinate varies with each individual circumstance. Generally, if your dog is not boarded or going to field trials or dog shows, or doesn't leave the house you may not have a high level of need for vaccinating your dog against Kennel Cough. If your dog happens to acquire Kennel Cough, it will then have some immunity to subsequent exposures. The length of time these natural exposures and the vaccinations will produce protective immunity will vary greatly. How often to vaccinate seems to have a subjective and elusive answer.

Be aware that vaccinating with just the commercial Kennel Cough vaccine alone (contains only the *Bordetella* agent) may not be fully protective because of the other infectious agents that are involved with producing the disease. Some of the other agents such as Para influenza and Adenovirus are part of the routine vaccinations generally given yearly to dogs. The intra-nasal *Bordetella* vaccine may produce immunity slightly faster than the injectable vaccine.

**NOTE:** Any vaccine takes days to weeks to stimulate the dog's protective immunity to the disease. Vaccinating a dog the day it is exposed to disease may not be protective. If you plan to board your dog, or protect it from exposure, remember to vaccinate a few weeks prior to potential exposure to allow full protective immunity to build up.