Kennel cough is most commonly associated with a bacterial infection caused by the organism Bordetella bronchiseptica. While it is hard to be certain in veterinary medicine when discussing statistics, it is estimated that 80 to 90% of the cases of kennel cough are due to this organism. The other 10 to 20% of cases are caused by a variety of other infectious agents, most of them viral. Kennel cough has been associated with parainfluenza virus, adenovirus and canine distemper virus as well as the Bordetella bacteria.

The incubation period from the time a dog is exposed until clinical signs appear varies depending on which infectious agent is the cause. In general it appears to be about 3 to 5 days with Bordetella. The infection tends to be mild except for a very harsh cough that often prompts owners to think that their dog "has something caught in his throat". In some dogs it can lead to pneumonia or more serious signs. Cough suppressants can be used to control the cough and antibiotics may be necessary for stubborn infections or to try to stop the spread of the bacteria in multiple dog households. It is probably a good idea to vaccinate dogs who will be exposed to large numbers of other dogs, such as at shows, obedience classes or the classic cause -- when left in kennels. The intranasal vaccine is pretty fast acting, providing some protection in as little as 5 days. The injectable version of the vaccine may provide longer immunity, though. Some vets use both to get maximum protection. We don't use either one routinely but give the intranasal vaccine to our patients who will be exposed to groups of dogs.