# Herpes Infection in Dogs

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Herpes is a virus that is has recently been associated with neonatal puppy death or failure to thrive, sometimes termed "fading puppy syndrome." In many instances when herpes infection has been confirmed, mortality among the littermates was 100%, making this a devastating problem for professional breeders and pet owners alike.

Bitches without prior exposure to the virus are at the greatest risk for catching herpes during late pregnancy and passing it along to the puppies. Generally, if a bitch is exposed during the last three weeks of pregnancy, she will either abort her litter or give birth to weak puppies that usually die by three weeks of age. This is because her immune system did not have time to make antibodies to the virus, and thus, the puppies do not get protection through immunity transfer in the milk or across the placenta.

Transmission of the virus to the bitch occurs by respiratory and genital secretions. For instance, a dog that is actively shedding the virus can touch noses with the bitch or simply sneeze and transfer the virus in vapors. The virus can also be carried briefly on clothing or other objects and infects the bitch when she sniffs them. The bitch will usually not manifest any outward signs of illness although there have been some reports of dogs having upper respiratory signs such as sneezing with the virus. The puppies get exposed to the virus as they pass through the bitch's vagina during birth. They can also be exposed through birthing fluids or respiratory secretions from the mother (vapors or licking).

Signs of the disease in puppies include anorexia, poor weight gain, trouble breathing, abdominal pain, incoordination, diarrhea, serous or hemorrhagic nasal discharge, and red spots on the gums. Puppies usually die from the disease very quickly (within days of birth or exposure). Dead puppies can have characteristic red spots on the kidneys, which can be observed by a veterinarian if an autopsy is performed. Occasionally a puppy will survive past the three-week mark. These puppies can often be chronic shedders of the virus and may be responsible for the spread of the virus to new dogs.

Since herpes is a virus, antibiotics are not effective against it. Some experimental treatments have been met with success, such as oral antiviral medications like Acyclovir. Aggressive supportive care is necessary to help puppies with the disease. Keeping them warm and dry, in a clean environment, properly fed and free of environmental stresses is the best way to maximize chances of survival. Even anti viral drugs, good nutrition, environment, and hygiene can fall short of overcoming this disease. Prevention of the disease is difficult since one must keep a bitch in isolation for three weeks prior to whelping and three weeks after to ensure that the virus does not infect neonates in the critical periparturient period. A vaccine is available in Europe, but not in the United States, as it has not been adequately evaluated. Keeping the bitch away from other dogs during late pregnancy and eliminating environmental stresses for the puppies are the best ways to minimize losses due to herpes.