

NEWCASTLE DISEASE IN FALCONS

Newcastle disease (ND) is an infectious and highly contagious disease caused by avian paramyxovirus-1 (APMV-1). This serotype of the virus is known to infect 241 species of birds belonging to 27 orders, including falcons and falcon hybrids. In domestic fowl (i.e. chickens), APMV-1 strains have been classified according to the type and severity of the clinical symptoms and pathologic lesions produced. Two examples include the neurotropic velogenic form, meaning it causes severe disease affecting the nervous system, and the viscerotropic velogenic form, meaning it causes severe disease affecting the internal organs. Avian PMV-1 is shed from infected birds in all secretions but mainly in respiratory excretions and in feces. Falcons are commonly infected directly with APMV-1 through feeding on infected domesticated pigeons. Aerosolized fecal dust and contaminated substrate can be potential sources of indirect exposure to APMV-1.

Based on clinical signs, two different clinical presentations producing distinct symptoms and pathologic lesions can be identified in affected falcons: the neurotropic velogenic form and the viscerotropic velogenic form.

Clinical signs associated with the neurotropic velogenic form of ND in falcons vary in type and severity but at an early stage include general nonspecific signs such as failure to interact or preen, loss of appetite, shredding and flicking of food, regurgitation, and metallic-green colored urates. Signs progress rapidly to more specific central nervous system symptoms such as difficulty eating, difficulty moving the tongue, salivation, vision loss, impaired movement of one or both third eyelids, spasms, difficulty walking, tremors, convulsions or death. It is common for affected falcons to have several central nervous system symptoms at once. In most cases, the symptoms develop and progress over a course of 12 to 24 hrs. The clinical signs can be present for 5 to 8 days before death.



Saker falcon (Falco cherrug) with the neurologic form of Newcastle disease.

Clinical signs associated with the viscerotropic velogenic form of ND in falcons also vary in type and severity but at an early stage commonly include general nonspecific clinical signs. These signs are followed by moderate to severe depression, diarrhea with blood and mucus, constant distressed vocalizations, and death. In general, the symptoms develop and progress rapidly in 24 to 48 hrs. The clinical signs are usually present for 3 to 5 days before death.

Unfortunately, falcons that become clinically ill with Newcastle disease invariably die. There is no treatment for the illness so prevention is of utmost importance. Since feeding of pigeons is how most falcons are exposed, pigeons are not recommended as a food source. Vaccination against APMV-1 is also an integral component of preventative medicine programs of falcons maintained in captivity. Inactivated oil-emulsion ND vaccines have been used successfully in falcons and other birds of prey without undesirable effects. Annual vaccination is recommended in areas where ND is prevalent. Talk with your avian veterinarian to find out if vaccination is appropriate for your bird.



Feeding of pigeons is how most falcons are exposed to Newcastle disease.



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AAV: Setting a Standard in Avian Care Since 1980

Avian medicine is a distinct and very specialized field that requires extensive training, advanced skills, and facilities specifically designed and equipped to treat and hospitalize birds. The Association of Avian Veterinarians was established to provide veterinarians with this special education, and to keep them up to date with the latest information on bird health. The AAV holds an annual conference on avian medicine and publishes the peer-reviewed Journal of Avian Medicine and Surgery. AAV also makes annual contributions toward avian conservation and sponsors studies advancing the understanding of avian medicine.

For More Information

For more information on birds, ask your veterinarian for copies of the following AAV Client Education Brochures:

- Aspergillosis in Falconry Birds
- Avian Chlamydiosis and Psittacosis
- Avian Pox Infection in Falconry Birds
- Veterinary Care for Your Pet Bird*
- Basic Care for Companion Birds*
- Behavior: Normal and Abnormal
- Caring for Backyard Chickens
- Digital Scales
- Falcon Herpesvirus Hepatitis
- Feather Loss
- Feeding Birds
- Injury Prevention and Emergency Care
- Lead Toxicosis in Falconry Birds
- Managing Chronic Egg-laying in Your Pet Bird
- Signs of Illness in Companion Birds*
- Ultraviolet Lighting for Companion Birds
- When Should I Take My Bird to a Veterinarian?*
- Zoonotic Diseases in Backyard Poultry*

**Available in multiple languages. All others are available in English only at this time.*

The treatment of ill birds should always be carried out by a qualified veterinarian.



Saker falcon (Falco cherrug) with the viscerotropic form of Newcastle disease.

Online Resources

Follow AAV on Facebook (www.facebook.com/aavonline) for great tips and the latest news for pet bird owners. You can also find us on Twitter (@aavonline) and YouTube!

Our website, www.aav.org, offers a Find-a-Vet tool to help pet bird owners locate avian veterinarians around the world. We also offer a variety of resources such as basic bird care instructions and more. Visit the website today!



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