

American Ferret Association (AFA) Vaccination Policy for Domestic Ferrets (*M. putorius furo*)

The AFA recommends two vaccines as a regular part of the domestic ferret wellness program: the Canine Distemper Virus (CDV) vaccine, which can be contracted from both pet dogs and wildlife and is almost always fatal to ferrets, and the rabies vaccine, which is required by law in most United States localities. To support their wellness, all ferrets should be seen by a veterinarian to establish care soon after acquisition, including those purchased at pet stores, and the visit should include a discussion with the veterinarian regarding what vaccines are needed.

Canine Distemper Virus (CDV)

Ferrets are highly susceptible to CDV. The disease is highly contagious and usually fatal in ferrets that contract it. Proper vaccination provides protection from infection and helps prevent the spread of the disease. The AFA recommends the use of a CDV vaccine licensed for use in ferrets. As of July 2025, two such vaccines are available in the US: **Purevax® Ferret Distemper** (manufactured by Boehringer Ingelheim USA, Athens, GA) and **NeoVac® FD** (manufactured by NeoTech LLC, Dresden, TN).

In the event an approved vaccine is unavailable, the AFA recommends the use of **Nobivac® Puppy DPv** (manufactured by Merck Animal Health USA). This limited-antigen vaccine has been used extensively in Europe to protect ferrets against CDV ¹. It utilizes the same strain as **Galaxy-D®** (manufactured by Fort Dodge), which, until it went out of production, was widely used in ferrets. At this time, **Nobivac® Puppy DPv** is the only CDV vaccine the AFA endorses for off-label use in ferrets. Although it also vaccinates against canine parvovirus, which ferrets do not get, it is considered the safest alternative when products licensed for ferrets are unavailable. The AFA has observed that many ferret veterinarians use **Nobivac® Puppy DPv** when **Purevax® Ferret Distemper** is unavailable. However, the AFA recommends discussing any vaccination protocol with the ferret's treating veterinarian and using tools such as antibody titers and risk assessment to determine the ultimate protocol for each animal.

The AFA strongly recommends that ferrets receive only monovalent (single-agent) vaccines. Manufacturers have designed the most current CDV vaccines for canine use; these products are multivalent (combination) vaccines. As stated above, **Nobivac® Puppy DPv** is the only exception.

In summary, the CDV vaccines licensed by the USDA for use in ferrets in the United States are:

- **Purevax® Ferret Distemper** (manufactured by Boehringer Ingelheim). Note that the previous manufacturer of this vaccine, Merial, was acquired by Boehringer Ingelheim in Jan 2017 and absorbed into their existing animal health entities. At the time of this writing, the manufacturer's website still had not been updated to

include the Ferret Distemper product. Still, it is currently in production and available from vaccine distributors.

- **Neovac® FD** (manufactured by NeoTech LLC, Athens, TN)
- Acceptable off-label alternative: **Nobivac® Puppy DPv** (manufactured by Merck Animal Health USA). **Disclaimer:** The AFA encourages anyone considering the use of **Nobivac® DPv** for their ferrets to review the available information with their veterinarian and make their own judgment and decision. The AFA assumes no responsibility and is not liable in any way for any issues associated with the use of **Nobivac® DPv** in ferrets.

Recommended Schedule for CDV Administration

- Kits: Less than or equal to 14 weeks of age with no previous or unknown vaccination history:
 - Give a series of three boosters at three-week intervals starting at 8 weeks (e.g., 8, 11, 14 weeks), then one annually thereafter.
- Adults: Healthy ferrets over 14 weeks of age with unknown, incomplete, outdated, or no vaccination history:
 - Give a series of two vaccines three weeks apart, then vaccinate annually.
 - Do not vaccinate pregnant jills, sick, debilitated, or elderly animals. In such cases, checking titers may be a better alternative.
 - Animals intended to be bred should be vaccinated/boostered at least once before the intended mating.
- Adults and kits with current and/or documented vaccination history (“up to date”):
 - Keep vaccination status current by boosting annually.
 - There is some evidence that vaccinating every 3 years may be adequate. Still, currently, the vaccines are labeled for annual use.^{2,3} If proof of immunocompetence is desired, a veterinarian can submit blood to a lab for titer testing. This measures the level of antibodies against a particular disease in your pet’s system. The preferred test is called serum-neutralizing, also known as virus-neutralizing. Cornell University’s animal health lab, among others, can perform this test.
 - Never vaccinate a ferret that has previously had an adverse response to that vaccine, no matter how mild. In cases where proof of vaccination is required, authorities will often accept a veterinarian's letter stating that vaccination is not medically advised for that animal.

If Exposure to the Distemper Virus (CDV) is Suspected

Kits as young as 6 weeks of age may be vaccinated. In this situation, the second vaccine should be given at 10 weeks of age, followed by the third booster at 14 weeks of age, since passive immunity (maternal antibodies transferred to the kit) may prevent a full response to the first vaccine in the series. CDV is highly contagious and highly lethal. Protocols for quarantine are beyond the scope of this policy, but any animal exposed to or suspected of infection should be quarantined immediately.

The AFA has specified the age of 6 weeks in the case of suspected or confirmed CDV exposure because it was reported that some of the kits born to jills with unknown, incomplete, outdated, or non-ferret CDV vaccine status died during a 1992 CDV outbreak. Typically, maternal antibodies against CDV should initially protect kits born to properly vaccinated jills. While vaccination at 6 weeks of age should not harm the kit, only a fraction (<30%) will be immunized after the first dose of the vaccine at this young age because of immunologic interference from antibodies present in the jill's colostrum and milk for up to 30 days. In other words, if vaccinated more than 8 weeks ago, the initial "first" booster may need to be repeated. Titer testing can confirm this.

Rabies Virus

Although it is unlikely that a ferret kept indoors would contract the rabies virus (RV), immunization is recommended for all ferrets. In most US municipalities, it is required by law. The RV vaccine protects an immunized ferret against exposure to the virus. Should a ferret escape the indoors and be found with any scratches, cuts, or bites, a positive RV vaccination status will provide the owner with peace of mind. Also, a ferret's documented RV vaccine status will support quarantine rather than euthanasia if it bites a person. Nevertheless, due to public health concerns, a ferret with no/unknown history of rabies vaccination may be euthanized for testing in the event it bites or even scratches a human.

Given the extremely serious nature of RV, a person with any pet-related wound has the right in many states to demand that the pet be tested for RV if the owner cannot produce evidence of vaccination. The test involves the collection of brain tissue post-mortem and its microscopic examination by a pathologist. Ultimately, documented proof of vaccination is far more likely to save a ferret from mandatory post-mortem testing than from an actual rabies infection.

RV Vaccines Licensed by USDA for Use in Ferrets in the United States

- **Defensor® 1 or 3** (manufactured by Zoetis)
- **IMRAB® 3** (manufactured by Boehringer Ingelheim)
- **Nobivac® Rabies (1 or 3)** (manufactured by Merck Animal Health USA)

Recommended Schedule

Give the first vaccine at 12 weeks of age or older, and annually thereafter, or as required by local regulations. The initial dose and subsequent doses are a single injection annually, even if the previous history is unknown. Note that while some of these vaccines have been approved for 3-year use in dogs and cats, as of 2025, none are currently labeled for use in ferrets for longer than 1 year in the US. In the event of known positive exposure, such as an encounter with sick wildlife, a veterinarian may opt to boost regardless of the next annual vaccination due date.

About Vaccine Reactions

It is not uncommon for ferrets to experience adverse reactions to vaccination. These reactions can range from mild gastrointestinal upset (vomiting, diarrhea) to full-blown anaphylaxis (severe adverse reaction). Therefore, do not vaccinate any animal unless appropriate emergency measures are available to manage such an event. For this reason, pet store/shelter vaccine clinics are discouraged for ferrets. Emergency care may include administration of antihistamines such as diphenhydramine (Benadryl®), steroids, IV fluids, and, in extreme situations, intubation and resuscitation. The symptoms of an adverse reaction typically appear very quickly, usually within 15 to 30 minutes of the injection, though delayed reactions can occasionally occur hours later. Therefore, following vaccination, closely monitor the ferret for no less than twenty minutes, and preferably for one hour, for signs of immediate hypersensitivity. Follow the treating veterinarian's recommendation.

The first signs of an adverse reaction may start with erythema (reddening) of the ears, nose, and footpads. Restlessness progressing to vomiting with or without diarrhea, respiratory distress, and full-blown anaphylaxis with the potential for death can develop in just a few minutes after vaccination. It has been observed that there is a correlation between the severity of the reaction and the time after vaccination when symptoms develop. In other words, the most severe responses seem to occur within a few minutes of vaccination, while milder symptoms, such as nausea and a single episode of vomiting or diarrhea, can occur the following day. The severity of a reaction is not predictable, and even a ferret previously vaccinated without incident may have a severe one. In fact, one study found that the risk of a reaction to the CDV vaccine increased with the number of cumulative vaccinations. Mild reactions may be treated with diphenhydramine (Benadryl®) and anti-nausea meds such as maropitant (Cerenia®). More severe anaphylaxis may require injectable steroids and IV fluids.

For this reason, the AFA strongly encourages all ferret owners to remain at the veterinary hospital to monitor their ferret for at least 20 minutes after vaccination, or according to their veterinarian's protocol so that they can treat any adverse reaction immediately. Owners should report to their veterinarian any changes in behavior or suspicious symptoms, such as vomiting or diarrhea, seen in the ferret within the next few days following vaccination. Any ferret that has experienced an adverse reaction should NEVER receive a vaccine against that disease again, even if a different vaccine brand is used. The AFA recommends that ferrets receive a single vaccine at a time, preferably spaced two weeks apart. This enables easy identification of the responsible vaccine in the event of an adverse reaction.

Some veterinarians pretreat the ferret with diphenhydramine (Benadryl®) to prevent or moderate potential adverse reactions. Still, other veterinarians feel that this dampening of the immune response may weaken the vaccine's protective effects. A concern has also been raised that the use of Benadryl® may delay the reaction so that it occurs after the waiting period, when the client and ferret may be too far from the clinic to return promptly. No research has been carried out in this area. However, a paper on the use of diphenhydramine in humans during the recent pandemic found that the antihistamine did not affect the efficacy of the COVID-19 vaccine.⁴ Brendan Noonan, Senior Clinician in Avian and Exotic Medicine at Angell Animal Medical Center in

Boston, Massachusetts, stated: “I do not feel the Benadryl® is reducing the efficacy of the vaccine. I think there could be merit to [the theory of] a mildly delayed reaction but if that means a reaction that is less severe, [then] I will take it...I see less [vaccine-associated reactions] now, but I have no reason to know why that would be so I keep doing things the way I do things. I do think it has been a long time since I have seen a severe reaction and almost never have to hospitalize overnight.”⁵

Special Circumstances

Sick or debilitated ferrets or those with any infectious process should not receive a vaccine. In addition, ferrets with chronic disease, hematologic malignancies, or undergoing immunosuppressive treatments may produce a poor immune response that is not protective or experience more adverse effects due to a weakened immune system and pre-existing physiological stress.

Elderly ferrets may be subject to the same concerns as sick ferrets. In addition, a history of no previous adverse response to a vaccine does not imply future vaccinations are without risk; in fact, the risk of an adverse reaction may increase with repeated exposure to the vaccine. Ferrets may be considered geriatric at three; however, there is considerable individual variation, and an animal may not truly show its age until six or seven. With this in mind, it may be worth considering not continuing to vaccinate beyond a certain age and instead opting to check titers. Consult with the treating veterinarian.

Additionally, the AFA discourages the vaccination of pregnant jills. Breeders should update the vaccination status of male and female ferrets at least one month before anticipated breeding if the animals are near their annual booster date. This will prevent the transmission of the disease during the breeding interaction, and it may confer some immunity to the kits from the jill through passive transfer of antibodies in her colostrum and milk.

Reporting Vaccine-Related Adverse Events

- United States Department of Agriculture Center for Veterinary Biologics
 - 1-800-752-6255
 - www.aphis.usda.gov/vs/cvb/html/adverseeventreport.html
- FDA Center for Veterinary Medicine
 - 1-888-FDA-VETS
 - www.fda.gov/cvm/
- Report to the vaccine manufacturer: By law, manufacturers must forward these reports to the appropriate government agency.

Information Regarding Titers

The AFA strongly supports using CDV titers instead of vaccination when circumstances permit. Titer testing measures the level of antibodies against a disease present in the ferret’s system. In a 2012 study, Wagner and Bharwaj found that after their initial vaccine series, most ferrets maintained adequate immune protection against the disease, and many did so for multiple years.² Therefore, titer testing can indicate

whether a ferret needs another booster or if it can wait another year.

A variety of titer tests are available. The 2012 Wagner and Bharwaj study used a method called Serum Neutralizing (also called Virus Neutralizing) Antibody Titer; therefore, this is the type that the AFA recommends.² There are a variety of tests for measuring titers; these were all developed and validated for canine use. At the time of this writing, prices varied widely by lab, with commercial veterinary labs more costly than university-based labs. Since a large part of the cost is due to expedited shipping, one way to manage the expense is to bundle samples when possible. The treating veterinarian can easily set up an account with Cornell University's Animal Health Diagnostic Center at <https://ahdc.vet.cornell.edu>, which was also used in the 2012 Wagner and Bharwaj study. Results are returned as a number that represents how much the ferret's serum (blood) could be diluted and still neutralize the infectivity of the virus. The ranges for Cornell's lab are characterized as follows: Low: 8-32; Medium: 64-128; High: 256-512; Very High: ≥ 1024

It should be noted that titers labeled "protective" should not be considered a guarantee of protection, just as no vaccine is 100% protective. The AFA's understanding of what constitutes adequate titers is based on canine data, not what is "correlated with clinical outcomes," as the American Animal Hospital Association notes in its reservations regarding another type of canine titer test. Dr. Ruth Heller wrote that "it has also been proven that a serum neutralization antibody titer of 32 or higher will protect dogs against infection... the protective cut-off point for ferrets has yet to be established by a challenge study, but doubling the canine protective level should allow for species variation."³

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Additional Reading/Bibliography

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