

# INVOICE

## The Ct for Bd and Exotic An Medicine

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Working to Advance Avian and Exotic Animal Health with Compassionate Care

**FOR:** Junwei Zhou  
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**Printed:** 04-11-25 at 3:47p

**Date:** 04-11-25

**Account:** 35123

**Invoice:** 275554

Date	For	Qty	Description	Price	Discount	Price
01 - OFFICE CALLS/CONSULTATIONS						
04-11-25		1	Office Visit (All Species)			75.00
VACCINES						
04-11-25		1	RHD- Multi Dose Vial, Medgene (0.			25.60
Total of services for CHEETO						100.60
04-11-25			Visa payment			-100.60

Merchant ID: 0002150008023115697761, Approval code: 044718, Transaction ID: 162093

Ref #: 4802451228897920, Act #: XXXXXXXXXXXXX7920, Entry: Hand Keyed, Card: VISA

Your card balance is not available

I AGREE TO PAY ABOVE TOTAL AMOUNT ACCORDING TO CARD ISSUER AGREEMENT

X

Old balance	Charges	Payments	New balance
-75.00	100.60	100.60	-75.00

Reminders for: **Cheeto** (Weight: 1.3 kg - 3y) Last done

04/26 Annual Health Check Up 04-11-25

Next appointment for **Cheeto**

Qty

05-02-25 At: 9:45a With: Alicia R. McLaughlin, DVM, CertAqVet

### Doctor's Instructions

#### Instructions for Cheeto

We vaccinated Cheeto for Rabbit Hemorrhagic Disease Virus (RHDV) today. The



vaccine was administered subcutaneously between the shoulder blades.

We administered a recombinant vaccine by Medgene, a USA-based company. The vaccine is an inactivated (killed) subunit vaccine that helps rabbits build immunity to RHDV2-specific antigenic proteins. Because the vaccine does not contain the entire virus, it is impossible for rabbits to shed infectious virus particles after vaccination. In order to be effective, 2 doses of this vaccine must be administered three weeks apart - \*\*\*please make sure you have scheduled the booster vaccine before leaving today.\*\*\* Protective antibodies are not produced until 35 days after the 1st dose (14 days after the second dose). At this time, it is unknown how frequently the vaccine will need to be boosted long term, but ongoing research will hopefully provide answers soon. Recent research from Colorado State University suggests that protective antibodies persist for at least 1 year in vaccinated rabbits. For now, we are recommending a single booster every 12 months after the initial series of vaccines is complete.

The Medgene vaccine has been made available to veterinarians through emergency use authorization, based on the company's current research on efficacy and safety, while it is continuing to undergo the USDA approval process. A study to evaluate the vaccine's performance against direct challenge with live RHDV2 virus showed zero mortalities in the vaccinated group of rabbits, and a 69% mortality rate in the placebo group after being challenged with the RHDV2 virus. A safety study showed 1% of vaccinated rabbits had minor post injection swelling at the site of vaccine administration that resolved within 48 hours. No other adverse effects were reported. The vaccine has met safety requirements for vaccinating rabbits as young as 4 weeks of age.

Other potential vaccination side effects in rabbits to be aware of include mild inflammation/discomfort at the vaccine site, fever, lethargy, decreased appetite or stool production, and anaphylaxis. If any of these side effects were to occur, they would likely surface within 24-72 hours after the vaccine was administered. Please contact us if you see any side effects from the vaccine, as we are keeping track of this to make sure everyone stays well informed.

If you have any additional questions about the vaccine or RHDV2, please let us know!

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Rabbit Hemorrhagic Disease Virus Variant 2 (RHDV2) is a highly contagious viral disease of domestic and wild rabbits caused by a Calicivirus. Morbidity and mortality rates are very high (up to 100%). Symptoms range from lethargy and bloody discharge from multiple orifices to sudden death. The virus is extremely resistant to environmental degradation, surviving and remaining infectious for at least 3 months in the environment and up to 9 days on flies. Rabbits surviving a natural infection with RHDV2 can shed the virus for at least 30 days, and potentially up to 105 days.  
<https://cms.agr.wa.gov/getmedia/07915d2d-bfd5-4cbb-b443-ab3b42b72722/RHDFactsheet>. Thankfully, the disease is not zoonotic.

RHDV2 is still technically considered a foreign animal disease, but its status has been changing over the past 2 years. In 2019-early 2020, RHDV2 was confirmed to be the cause of multiple rabbit deaths in several locations in Washington State (San Juan Islands, Whidbey Island, and Clallam County - see information here: [aphis.usda.gov/animal\\_health/downloads/emerging-risk-notice-rabbit.pdf](https://aphis.usda.gov/animal_health/downloads/emerging-risk-notice-rabbit.pdf)). The virus is believed to have spread to WA via scavenging birds traveling from Canada to the San Juan Islands. The disease was identified as RHDV2 following rt-PCR testing at the National Veterinary Laboratory of samples taken from deceased rabbits. A more virulent strain of RHDV2 spread across the southwestern United States in summer 2020 and started infecting native lagomorph populations (cottontail rabbits and hares) - this is a bad sign, as previously the disease had been reported only in European rabbits (which is the species kept domestically in the United States). As it will be extremely difficult to eliminate this disease from the wild population due to issues regarding cost, vaccine technology, and other logistics, this disease is likely going to become endemic to the US from now on.



Dr. McLaughlin was the first veterinarian in the United States to successfully obtain a permit from the federal government to import vaccines against this virus from Europe. The brand of vaccine that the Washington state vet permitted to be imported at that time was Filavac, which is made in France and protects against both RHDV1 and RHDV2. We vaccinated thousands of bunnies with Filavac to protect them during and after the outbreak. Now that a domestically produced vaccine is available from Medgene, we have switched to using this product for our patients, and have been very pleased with its safety and efficacy profile.

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#### Biosecurity recommendations to reduce the risk of spreading Rabbit Hemorrhagic Disease

Modified from original source: <http://rabbit.org>.

- House your rabbits indoors. Rabbits who live outdoors and those who exercise outdoors are at greater risk of contracting this disease.
  - Wash your hands thoroughly before handling your rabbits, particularly when you come home from places where other rabbits may have been, or where people who have been in contact with rabbits may have been, including feed stores, pet stores, fairgrounds, humane societies, etc.
  - Adopt a "no shoes in the house" policy, or keep your bunnies from running in high traffic areas of your home.
- Trim your rabbit's nails and groom them at home.
- Change your clothes and wash your hands after handling or coming in contact with other rabbits. Launder your clothes and run them through the dryer before allowing them to come in contact with your rabbit.
  - Do not let your rabbit come into physical contact with other rabbits from outside your home, for example, "hoppy hour" or "bunny playground" activities.
  - If you volunteer at a shelter in an area with an outbreak, have special clothes and shoes that you wear only at the shelter. You may want to wear shoe covers or plastic bags over your shoes, secured with a rubber band. When you leave the shelter, remove the bags and dispose of them before you get into your car, making sure not to touch the outside of the bag. Follow clothes laundering instructions above, and shoe disinfecting instructions below. This protects the shelter rabbits as well as your own. The same considerations apply to anyone who sees rabbits at work and also has rabbits at home.
  - To disinfect shoes that may have been contaminated, place the shoes in a bath containing one of the below disinfectants. The shoes must be in contact with the disinfectant for the required contact time, during which time the disinfectant must remain wet. Be sure to read the label instructions for contact time for your disinfectant.

- Use an effective disinfectant for this virus (Sodium hypochlorite or Potassium peroxymonosulfate are CBEAM's recommendations). Clean the item first, then disinfect. Read all disinfectant instructions and safety information provided by the manufacturer before using. See the USDA guidance for cleaning and disinfecting a RHDV2-contaminated premises.

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More details about these disinfectants:

=Sodium hypochlorite, household bleach (1:10 dilution = 1.5c bleach (12oz) in 1 gallon water). Organic matter inactivates bleach, so be sure the item is thoroughly cleaned with soap and water before disinfecting.

Check the label on the bleach to make sure it is intended for disinfection, and not expired

Never mix bleach with other cleaning products

Animals must be removed from the area when bleach is used

Wear gloves when handling bleach, and use in a well-ventilated area

Once diluted, bleach loses efficacy after 24 hours

Wet contact time must be maintained on the surface for at least 10 minutes

Following disinfection, bleach should be rinsed off and surface dried before animal



contact

Bleach can be a respiratory or skin irritant and may damage or discolor some items it contacts.

=Potassium peroxymonosulfate (1% Virkon S, Trifectant) - this is a highly effective antiviral compound. It can be irritating to mucous membranes, and may leave a residue on some surfaces.

Disinfect objects using one of the disinfectants above. Remember it must stay in contact with the item and remain wet for the required contact time of the disinfectant.

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- Know your sources of hay and feed.

Avoid feeding hay grown, or stored outdoors, in an outbreak area. On farms and at many feed stores, hay bales are stored outdoors, or in barns that are open to insects, birds, rodents, cats, or other animals that could spread the virus.

If hay was grown in an outbreak area, ask if it was stored indoors in an environment secure from insects, birds, rodents, cats, or other animals. If the hay is stored in packaging (for example, a cardboard box or plastic bag), you can ask how long the hay has been packaged.

As the virus is no longer viable after 105+ days at room temperature (68F), hay that has been grown in an outbreak area but securely stored for longer than 4 months would minimize the risk. In areas with cooler temperatures, hay would need to be securely stored longer - RHDV lasts 225 days at 39F, so would need to be stored for 8 months to minimize the risk.

Do not feed plants, grasses, or tree branches foraged from outside in areas where there is an outbreak.

Avoid feeding vegetables grown in an outbreak area. At this time, we do not know the risk that feeding greens/produce may present to rabbits. There may be a risk of RHDV contamination of produce during growing/harvesting in outbreak areas. The disease is currently spreading in areas where produce is commercially grown.

Some ways to reduce the risk of feeding produce are as follows:

Know where produce was grown, and feed if not grown in a current outbreak area.

Grow greens in covered spaces (greenhouses/indoors).

Thoroughly wash produce in a basin for at least 2 minutes, with several water changes during the process. Do not use soap or disinfectant on vegetables.

Peel vegetables (for example, carrots).

- Minimize insects in your home by installing window and door screens. Eliminate mosquitoes and flies from your home. Use monthly flea treatment - Revolution or Advantage II are safe for rabbits. NEVER use Frontline on rabbits. Treat rabbits and cats and dogs, in an area with an outbreak, especially if any pets in the home go outside.

- Homes with dogs and rabbits: Keep dogs on-leash outside, so they do not directly interact with wild rabbits (alive or deceased). Consider having your dog wear booties outside, or washing dog paws when coming inside. Designate separate areas in your home for your dog and block dog access to areas where your rabbits live or exercise.

- Quarantine any new rabbit for at least 14 days. Always handle quarantined rabbits last, and keep all supplies for them separate from your other rabbit's supplies.

- If you see a dead rabbit outside, do not touch them. Contact state wildlife officials if it appears to be a wild rabbit. By reporting any dead rabbits seen outside, you will help protect domestic rabbits, as we will know where the disease is spreading.

The best way to protect your rabbits is to get them vaccinated!

**Cheeto's weight history (in kg)**



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04-11-25	1.28
09-22-23	1.17
09-15-23	1.13
09-14-23	1.13

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Please Note, in order to refill medications through CBEAM a credit or debit card must be stored on file. The card will be charged for the price of the medications as soon as they are made. Medications that are not picked up within two weeks will be discarded without a refund.