

Directions for Using a Nasal Atomizer to Administer Midazolam

Your pet is going home with supplies to give them an intranasal dose of midazolam in the event of a seizure. The atomizer turns the liquid midazolam into a fine mist so that it is quickly absorbed by your pet's nasal mucous membranes to stop the seizure activity. If you have any questions or concerns regarding the use of the midazolam atomizer and/or administration of this drug, please do not hesitate to contact the VNC. Our phone number, email address, and website URL can be found at the top of the right-hand corner of this page. These directions can also be found on our website at the following URL:

<https://vetneuro.com/resources/forms/client-forms/>

Video Tutorials

The VNC has produced a video tutorial for using a nasal atomizer to administer midazolam to complement these written directions which can be accessed via the following URL:

<https://youtu.be/oG77S83pXxM>

Additionally, the manufacturer of the nasal atomizer, LMA, has a helpful video tutorial that you can watch in addition to the VNC tutorial video and written instructions. The video can be accessed via the following URL: <https://www.youtube.com/watch?v=7sJMaSOoH88>

1. Supplies You Will Be Taking Home

- 10mL vial(s) of Midazolam
- LMA MAD Nasal Atomizer
- Syringes - Size and number will vary based on patient weight and midazolam dose. A VNC technician will indicate the size and number of syringes you are taking home.)

For VNC Technician Use:	
Syringe Size:	Amount:
1mL	
2mL	
3mL	
5mL	
10mL	

2. General Considerations

- Wash your hands before handling medication and syringe.
- Do not touch bare needle before inserting into midazolam vial to prevent introduction of bacteria into the midazolam vial.
- As seizures are unpredictable it is recommended that you store supplies together in easy to access place to make it easier to quickly gather everything you need in the event of a seizure.
- Store midazolam vial at room temperature. Avoid storing it where it can become hot, e.g. 80+ degrees.

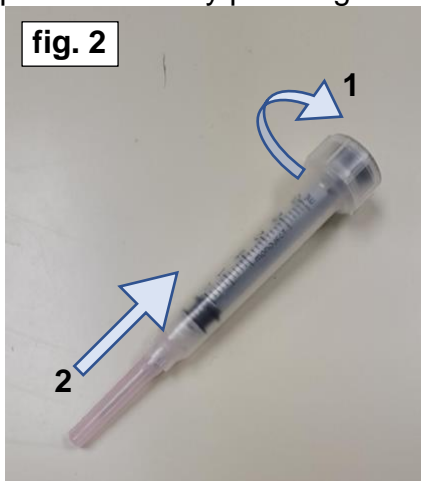
3. Nasal Atomizer Use Directions

The following are directions for how to use the nasal atomizer attachment with syringes that will be included with your pet's midazolam that will allow for intranasal administration of midazolam in the event of a seizure.

- **Gather Supplies:** Gather the vial of midazolam, syringe with hypodermic needle, and the nasal atomizer (fig. 1)

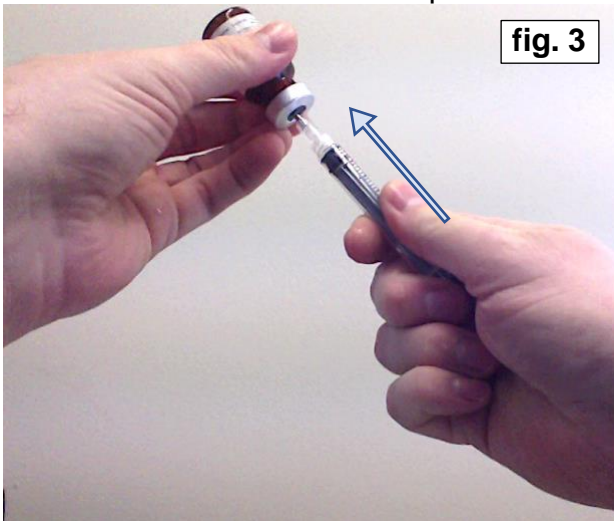


- **Open Syringe:** Open the protective plastic cover for the syringe with needle by twisting the cap covering the syringe plunger either clockwise or counterclockwise (fig. 2-1). You should hear a snap and then should be able to easily remove the syringe from this plastic cover by pressing down on the needle cap (fig. 2-2).

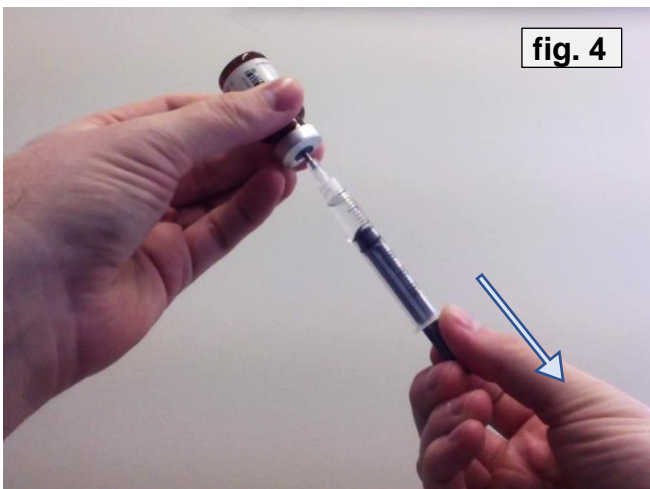


- **Remove Plastic Cap/Seal from Midazolam:** If your vial of midazolam has not yet been opened and used, then you will need to remove the plastic cap from the vial. Apply pressure to the lip of the white cap and push upward. The cap should easily snap off reveal a rubber and metal cap.
- **Hold the Midazolam Vial Upside Down with One Hand:** This is done to prevent getting air into the syringe.
- **Hold the Syringe with Needle in Your Other Hand.**
- **Remove the Cap from the Needle.**

- **Insert the Needle into Midazolam Vial:** Carefully insert the needle into the inverted midazolam vial via the rubber portion of the vial's cap (fig. 3).



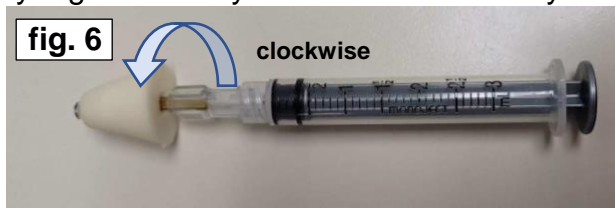
- **Draw Up Midazolam Dose:** Pull back on the syringe plunger to draw up midazolam into the syringe. Pull back on the syringe plunger until the prescribed dose in milliliters is drawn up (fig. 4).



- **Remove Needle from Midazolam Vial:** Carefully remove the syringe's needle from the Midazolam vial and place the cap for the needle back on the syringe.
- **Place Midazolam Vial Down:** Place the midazolam vial back down either back where it is stored or in a safe temporary place until you are able to return it to where it is being stored.
- **Remove the Needle from the Syringe:** With the needle cap on, grasp the cap and needle and twist counterclockwise to remove the needle from the syringe (fig. 5).



- **Place Atomizer on Syringe:** Take the nasal atomizer and place it on the syringe where the needle was previously and twist it clockwise to secure the atomizer to the syringe. Ensure you have twisted until you cannot do so to ensure a tight seal (fig. 6).



- **Tilt Pet's Head Back:** With your syringe and attached atomizer in your hand, approach your pet and tilt their head back at a 45° angle.
- **Administer Midazolam Dose:** With your pet's head at a 45° angle, insert the tip of the nasal atomizer into either the left or right nostril (For doses larger than 1 mL split the dose between both nostrils). Push the plunger on the syringe to administer the midazolam via the atomizer.
- **Clean Nasal Atomizer:** After using the nasal atomizer it must be cleaned. Clean the nasal atomizer by running warm water through it and allow it to dry completely before its next use.

4. Questions/Concerns

If at any time you have any questions or concerns regarding administration of midazolam using the nasal atomizer or your pet's condition, please feel free to contact us.

- **For the most immediate assistance:** If you have a question or concern that is urgent and in need of an immediate response, please call us using the telephone number listed on the top right-hand corner on the front page of these directions, Monday through Saturday, from 9am – 5pm.
- **If your concern is not urgent or an emergency, and it is after our normal working hours:** please feel free to leave a voicemail or email us, using the email address that is also located at the right-hand corner on the front page of these directions. Voicemails are answered the following morning and we answer emails by the end of the next business day.
- **If your concern is urgent and/or an emergency and it is after our normal working hours:** please contact your primary veterinarian or a local emergency hospital.