

## What is midazolam?

Midazolam is an emergency medicine used to stop seizures. It can be given into the nose (intranasal). The brand name is called Versed.

## Why is intranasal midazolam used?

Intranasal midazolam:

- Is a fast way to give medicine to a child who cannot swallow. This is because it gets absorbed through the small blood vessels of the nose.
- Works faster than oral medicines (those that must be swallowed).
- Is more reliable than rectal medicines (those given in the rectum, the body opening where stool comes out).

## When should intranasal midazolam be used?

Use the medicine only as advised by your child's doctor. Some guidelines include:

- It may be used when someone is having an active seizure, lasting 5 minutes or longer.
- It may be used when someone has 3 or more seizures in 1 hour.
- It should NOT be used as a maintenance medicine to prevent seizures.

## What dose of intranasal midazolam does my child need?

- The doctor will prescribe the dose that is right for your child. Follow the doctor's directions carefully.
- Your child's dose is based on their age and weight.
- You will prepare the dose when you need to treat your child.
- Sometimes 1 dose of intranasal midazolam is not enough. Your child's doctor may prescribe more than 1 dose.

## How do I prepare and give the dose of intranasal midazolam?

Your child's doctor, nurse or pharmacist can teach you how to give the medicine to your child. You will use a MAD nasal tip. MAD stands for mucosal atomizer device. It allows you to spray the medicine into the nose.

1. Gather your supplies. You will need:
  - Alcohol swabs
  - 3 mL (milliliter) syringe
  - A needle
  - Bottle of midazolam
  - MAD nasal tip
2. Remove the cap from the bottle. Clean the top of the midazolam bottle well with an alcohol swab. Let it dry.

**In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.**

# Intranasal midazolam, continued

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## To draw up the correct dose:

3. Place the needle on the syringe. Remove the cap from the needle.
4. Pull air into the syringe equal to the amount of medicine you will give. Insert the needle into the top of the medicine bottle.
5. Push the air into the medicine bottle.
6. Turn the bottle upside down, and pull back slowly on the plunger. Fill the syringe with the amount of medicine needed. If there is an air bubble:
  - Pull back a little more medicine.
  - Then, tap the side of the syringe so that the air goes to the top. Push the air out.
  - Check the syringe again to make sure the dose is correct.
7. Remove the syringe from the medicine bottle. Place the cap on the needle. Remove the needle from the syringe.
8. Attach the MAD nasal tip to the top of the syringe.
9. Be sure the dose is not more than 1 mL per nostril.

## To give the dose:

10. Hold the syringe with the MAD nasal tip between your first 2 fingers. Rest your thumb on the plunger end of the syringe.
11. Place the MAD nasal tip in one nostril. Press the plunger, and give **half** the amount of medicine in the syringe.
12. Place the MAD nasal tip in the other nostril. Press the plunger, and give the other half of the medicine in the syringe.
13. Take note of the time you gave the medicine, and keep watching your child.

If your child's seizure continues, the doctor may tell you to give a second dose of intranasal midazolam 5 to 10 minutes after the first dose. **Only do this if your child's doctor tells you to do so.** Once opened, the bottle must be used within a short time and cannot be saved.

See page 4 for step-by-step pictures of how to give intranasal midazolam.

## What are some possible side effects?

Your child may have one or more of these:

- Feel sleepy or light-headed
- Have some slight burning or irritation in the nose
- May cough, sneeze or have a bitter taste in the mouth. This comes from giving the medicine in the nose.

## Call 911 right away if:

- Your child has any breathing problems that need to be taken care of right away.
- Your child has chest retractions (skin pulling in around the ribs and chest when breathing).
- Your child has a blue or dark purple color to the nails, lips or gums.
- You have to give a second dose of intranasal midazolam or if you need to give diazepam rectal gel (Diastat).

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# Intranasal midazolam, continued

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## Call your child's doctor if:

- You have any questions or concerns about how your child looks or feels.

## Where do I get the medicine and MAD nasal tip?

Your child's doctor will give you a prescription for midazolam and a MAD nasal tip. Talk with the nurse or doctor about what stores have these supplies.

## How do I care for the MAD nasal tip and supplies?

- Once your child is OK, clean the MAD nasal tip so you can reuse it. Clean it with hot, soapy water. Rinse it well, and let it dry completely before putting it away.
- Put used medicine bottles, needles and syringes into an FDA-cleared sharps container. If you cannot find one, use an empty household container, such as a laundry detergent container that:
  - Is made of heavy-duty plastic.
  - Stays upright.
  - Has a tight-fitting lid that cannot be punctured.
  - Does not leak.
- Close the lid, and tape it shut. Label the container "Do Not Recycle," and place it in the trash.
- You may also go to the FDA website at [www.fda.gov/safesharpsdisposal](http://www.fda.gov/safesharpsdisposal) for more details on safe sharps disposal.

## When should I avoid using intranasal midazolam?

**Do not** use intranasal midazolam if your child:

- Has a bloody or stuffy nose. A bloody or stuffy nose can prevent the medicine from absorbing well.
- Has a nose injury that causes a blockage.

## What medicine safety tips should I know?

- Always read the label before giving medicine to your child.
- Keep all medicines in their labeled container where your child cannot get to them. If possible, store all medicines in a locked cabinet.
- Return all medicines to the pharmacy to dispose of after their expiration date on the container.
- Tell your child's doctor, dentist and the emergency department (ED) about any medicines your child is taking. Take the medicines with you.
- Call the Georgia Poison Control Center at 800-222-1222 or call 911 **right away** if your child takes too much medicine or has a bad reaction to medicine.

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**This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.**

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# Intranasal midazolam, continued

1



Gather your supplies:

- Alcohol swabs
- 3 mL (milliliter) syringe
- A needle
- Bottle of midazolam
- MAD nasal tip

2



- Remove the cap from the bottle.
- Clean the top of the bottle with an alcohol swab.
- Let it dry.

3



- Place the needle on the syringe.
- Remove the cap from the needle.

4



- Pull air into the syringe.
- Insert the needle into the top of the medicine bottle.
- Push the air into the medicine bottle.

5



- Turn the bottle upside down, and pull back slowly on the plunger.
- Fill the syringe with the amount of medicine needed.

6



- Remove the syringe from the bottle.
- Place the cap on the needle.
- Remove the needle from the syringe.

7



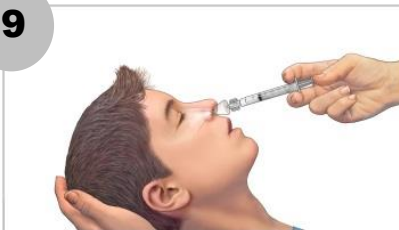
Attach the MAD nasal tip to the syringe.

8



Hold the syringe between your first 2 fingers.  
Rest your thumb on the plunger end of the syringe.

9



- Place the MAD nasal tip in one nostril.
- Press the plunger, and give **half** the amount of medicine in the syringe.

10



- Place the MAD nasal tip in the other nostril.
- Press the plunger, giving the other half of the medicine in the syringe.

11



Take note of the time, and keep watching your child.

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