

## **Intranasal/buccal Midazolam for Seizure Rescue**

### **Compounded Formula Using Parenteral Midazolam**

**Dose:** 0.2-0.3 mg/kg, maximum dose of 10 mg

- Use 5 mg/mL parenteral dosage form
- Draw appropriate dose into a syringe
- Optionally: pretreat nasal mucosa with local lidocaine to decrease burning sensation (possible, but not necessary)
- Attach an atomizer device to the end of the syringe containing midazolam (e.g., <https://www.teleflex.com/usa/en/product-areas/anesthesia/atomization/mad-nasal-device/index.html>)
- Inject the dose into a single nostril or divide the dose between both nostrils for volumes >0.4 mL.
- Alternatively, the midazolam dose can be dripped into the nostrils, with half of the dose in one nostril and the other half in the other nostril, or sprayed via a syringe between the teeth and cheek to the side of the mouth
- Monitor seizure activity, respirations, heart rate, and sedation.

### **References**

Nationwide Children's Hospital. Intranasal Midazolam (Versed®) – Prefilled Syringe. HH-V-239 2/93 Revised 6/162016.

Children's Hospital of Colorado. Intranasal Midazolam (Versed): How to Prepare and Give for Seizures. <https://www.childrenscolorado.org/globalassets/healthcare-professionals/clinical-pathways/neuro-intranasal-midazolam-english.pdf>. Accessed 25 April 2022.

Lahat E, et.al. Comparison of intranasal midazolam with intravenous diazepam for treating febrile seizures in children: prospective randomised study. *BMJ*. 2000;321:83-86.

Scott RC, et.al. Buccal midazolam and rectal diazepam for treatment of prolonged seizures in childhood and adolescence: a randomised trial. *Lancet*. 1999; 353: 623-626.

## **Rectal Diazepam for Seizure Rescue**

### **Compounded Formula Using Parenteral Diazepam**

**Dose:** 0.2-0.75 mg/kg, maximum single dose of 10 mg

#### **Option 1**

- Draw up the appropriate dose into a syringe
- Administer the dose rectally
- Hold cheeks of buttocks together to minimize leakage.

## Option 2

- Mix parenteral diazepam with a 50% solution of propylene glycol in water to a concentration of 1 mg/mL.
- Store in glass container. Compounded mixture should be stable for several months
- Draw up correct dose using a syringe with rubber tube attached.
- Administer the dose rectally using the rubber tube.
- Hold cheeks of buttocks together to minimize leakage.

## References

O'Sullivan CO, Harvey AS. The use of rectal diazepam for the treatment of prolonged convulsions in children. *Aust Prescr* 1998;21:35-6.

The Royal Children's Hospital Melbourne. Rectal diazepam. [https://www.rch.org.au/neurology/patient\\_information/rectal\\_diazepam/](https://www.rch.org.au/neurology/patient_information/rectal_diazepam/). Accessed 25 April 2022.

Segar JL, Tierney SB. Dosage recommendations for anticonvulsants employed in neonatal seizures. University of Iowa Stead Family Children's Hospital. <https://uichildrens.org/health-library/dosage-recommendations-anticonvulsants-employed-neonatal-seizures>. Accessed 25 April 2022.

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