



Intranasal and Buccal Midazolam

(for the Emergency Management of Seizures)

What is Midazolam?

Midazolam (Hypnovel) is a short acting benzodiazepine medication like Diazepam (Valium, Antenex, Ducene) and Clonazepam (Rivotril, Paxam).

What is Midazolam used for?

Midazolam is used for:-

- Emergency treatment/management of prolonged seizures
- Sedation during medical procedures

Midazolam may be prescribed for people with epilepsy who:

- Often have seizures that last longer than 5 minutes
- Have a cluster of seizures that recur close together
- Have a history of status epilepticus
- Live a long way from emergency services
- History of recurrent prolonged febrile convulsions

Parents / carers should complete education in the administration of midazolam to ensure they are confident in their ability to do so.

How is Midazolam given for seizure management?

Midazolam can be given in the following ways:-

- **Buccal** - Trickled inside the cheek between the lower gums and inner cheek area of the mouth
- **Intranasal** - Dripped slowly into the nasal passage or sprayed into the nose using a nasal atomiser device

Midazolam is absorbed rapidly via mucosal membranes in the nose or mouth and directly into the blood stream. It does not need to be swallowed. If swallowed it will be less effective (swallowing is not harmful). Ambulance officers and medical practitioners are able to give midazolam intramuscularly

(into the muscle) or intravenously (into the vein).

Please see the QPEN Administration of Midazolam instruction sheet attached.

First Aid

- Time the seizure
- Ensure the person is placed in the recovery position if there is a loss of consciousness
- Ensure the person's airway is open and clear
- Watch the person's breathing
- Document the time the seizure started
- Document the time the medication was administered, the amount, the date and the response
- Document the type of seizure
- Document the time the seizure stopped
- Do not leave the person unattended after the medication has been administered
- Safely discard any open ampoules

Unless your doctor has given you different instructions call an ambulance before administering the midazolam.

Possible effects of Midazolam

Midazolam has a sedative effect therefore the person may experience

- Drowsiness
- Tiredness
- Weakness
- Headache
- Nausea
- Vomiting
- Hiccups
- Altered mood and balance (giggling, hyperactivity, unsteady on feet)
- Irritation and or stinging of the nostrils (intra-nasal route)



In rare cases the person may become:

- Agitated
- Hostile
- Aggressive

The person may experience slow shallow breathing after having midazolam. If this happens, the person may require mouth to mouth resuscitation. Call an ambulance immediately.

Key points to remember:

- **Epilepsy Queensland Inc does not recommend the use of glass ampoules. Use 1ml plastic ampoules containing 5mg of midazolam in 1ml**
- Midazolam needs to travel wherever the person goes, in case of a seizure away from the home
- It is very important to follow your doctor's advice on when and how to give midazolam, when to phone an ambulance, and when to take the person to hospital
- It is helpful for families and people who care for a person with epilepsy to do a first aid course to improve their ability and confidence in emergency situations
- Keep a record of the person's seizures and use of midazolam
- Midazolam needs to be stored at room temperature (between 8-25 degrees C) - not in a fridge, freezer or hot car. It must be protected from light (in a box or wrapped in foil), and locked away out of reach of children
- Plastic ampoules are labeled 'for slow IV or IM injection' but can also be used for buccal or intranasal route
- Regularly check midazolam expiry date, if expired, return to a pharmacy.
(Unopened ampoules will be suitable for use up to 8 months after the foil sachet is opened, if protected by light)

If you are required to give midazolam, consider the following:

For families, carers and support workers:

- Training should be person or client specific
- It is important you understand and follow the Emergency Medication Management Plan as ordered by the treating doctor.
- You must know the dose, what seizure type it is needed for and at what time you are instructed to administer midazolam
- You know when to call an ambulance

- You know how to perform CPR

Additional considerations for workers:

- Ensure your CPR and first aid certificates are current
- Ensure you understand and follow your workplace policies in relation to managing epilepsy and administering medication
- Your workplace should arrange training prior to administering midazolam for the first time

Nasal Atomiser Device

Nasal atomiser devices can be obtained through Epilepsy Queensland. Please contact the office on the numbers below for more details.

Training and Support

Epilepsy Queensland provides training in the 'administration of midazolam', 'Understanding epilepsy' and assists in the development of Emergency management plans for families or staff supporting a person with epilepsy. Contact Epilepsy Queensland for further information.

Reference:
RCH Children's Neuroscience Center & RCH Pharmacy
First published 2006. Updated 1Feb2011
http://www.rch.org.au/kidinfo/factsheets.cfm?doc_id=9300
Mater Children's Hospital Neurosciences Unit.
Epilepsy Foundation of Victoria.

Although every effort has been made to ensure accurate information is provided, Epilepsy Queensland Inc and its advisors cannot accept any liability in relation to the information provided. It is strongly recommended that you discuss any information with your doctor or other relevant organisation.