



GUIDELINE

Seizure - Medication

Scope (Staff):	All Emergency Department Clinicians
Scope (Area):	Emergency Department

This document should be read in conjunction with this DISCLAIMER
<http://kidshealthwa.com/about/disclaimer/>

Seizure - Medication

Medication

Preparation

Mixing instructions (for infusions, and drugs needing to be mixed with a diluent prior to administration)

Drug	Diluent	Volume of Diluent	Rate of Administration	Precautions and Side Effects
Phenytoin (IV loading dose) 20mg/kg Max dose = 1g	0.9% Saline (not compatible with glucose or other drugs, insert 2nd line)	Children \leq 30kg 100mL (add drug directly into a 100mL bag of 0.9% Saline) Children $>$ 30kg 250mL (add drug directly into a 250mL bag of 0.9% Saline)	\geq 20 minutes in ED only (controlled using an infusion pump)	<ul style="list-style-type: none">• Take into account any Phenytoin received recently (including orally)• Do not prepare more than the required amount• Line must be flushed before and after with 0.9% Saline• ECG and BP monitoring essential• Reduce the rate of administration if bradycardia or hypotension develop• See below for special considerations and monitoring required
Phenobarbitone (IV loading dose) 20mg/kg	Water for injection or 0.9% Saline or 5% Dextrose	Dilute to 20mg per 1mL of diluent	Over 10-20 minutes	<ul style="list-style-type: none">• Respiratory depression• Hypotension• Incompatible with many drugs• Avoid extravasation• Effects are potentiated by concurrent use of other barbiturates or benzodiazepines

Paraldehyde 0.4mL/kg (rectal) Max dose = 5mL Rectal administration	Olive oil or 0.9% Saline	Dilute 1:1 (1 part paraldehyde to 1 part diluent)		<ul style="list-style-type: none"> • Can be prepared in plastic syringe if given immediately thereafter • Avoid IM / IV administration
Midazolam (continuous infusion)	0.9% Saline or 5% Dextrose	Midazolam 2.5mg/kg in 50mL of diluent. (a rate of 1 mL per hour will give a dose of 50 microgram/kg/hour)	50-250 microgram/kg/hr = 1-5mL per hour	<ul style="list-style-type: none"> • Should be used in ventilated patients in intensive care unit
Clonazepam Total dose not weight related Neonates: up to 0.25mg IV (lower doses if not ventilated) Child: up to 0.5mg IV Adult: 1mg IV (can be repeated)	Use diluent as provided (in ampoule)	Mix 1mg ampoule with 1 mL of diluent to give a 0.5mg/mL solution	Over at least 2 minutes	<ul style="list-style-type: none"> • Respiratory depression, especially if given quickly or combined with barbiturates or other benzopines
Levetiracetam (Keppra) 40mg/kg IV Max dose = 3g	0.9% Saline or 5% Glucose	Dilute 1:1 Medication can be given undiluted	Infuse over 5 minutes	<ul style="list-style-type: none"> • Incompatible with many drugs • Compatible with lorazepam, diazepam

Special

Preparation:

- Prepare infusion immediately before use and discard if not commenced within 30 minutes of preparation. Do not prepare more than required dose.
- Check for haziness or precipitation before and throughout the infusion
- **Compatibility note:** Phenytoin is only compatible with 0.9% saline. Do not administer with any other drugs.

Flushing Lines:

- Flush IV lines before and after Phenytoin administration with 0.9% Saline
- After the drug is given, give the flush at the same rate as the infusion. The volume of flush must be sufficient to clear the line of all remaining drug.

Monitoring the Patient Receiving IV Phenytoin:


- Infusion rates of IV Phenytoin are different for ward areas – please refer to Nursing Practise Manual and Pharmacy Guidelines
- For the **loading dose** monitor BP, continuous ECG, pulse and respiration every 5 minutes during the infusion and for 30 minutes after completion of the flush
- If bradycardia or hypotension occurs, stop the infusion and call the doctor. Consider

recommencing the infusion at a lower rate.

Tags

clonazepam, epilepticus, keppra, levetiracetam, medication, midazolam, paraldehyde, phenobarbitone, phenytoin, seizure, status

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