



CHLORAL HYDRATE

Indication	<ul style="list-style-type: none"> • Short term mild sedation • Procedural sedation (e.g. EEG; CT scan; MRI) 	
ORAL	Presentation <ul style="list-style-type: none"> • Oral solution 100 mg/mL • QH-Central Pharmacy product: 50 mg/mL 	
	Dosage <ul style="list-style-type: none"> • Sedation <ul style="list-style-type: none"> ◦ 8–10 mg/kg every 6 to 8 hours¹⁻³ • Procedural sedation <ul style="list-style-type: none"> ◦ 30–50 mg/kg stat¹ ◦ May start with 30 mg/kg, followed by 20 mg/kg after 20 minutes if required² 	
	Preparation <ul style="list-style-type: none"> • Dilute 1-part chloral hydrate with:3 parts water for injection (unpleasant taste) 	
	Administration <ul style="list-style-type: none"> • Oral/OGT/NGT • 45–60 minutes prior to procedure • After feed⁴ to minimise gastric irritation⁵ 	
RECTAL	Presentation <ul style="list-style-type: none"> • Oral solution 100 mg/mL • QH-Central Pharmacy product: 50 mg/mL 	
	Dosage <ul style="list-style-type: none"> • Sedation <ul style="list-style-type: none"> ◦ 8–10 mg/kg every 6 to 8 hours¹ • Procedural sedation <ul style="list-style-type: none"> ◦ 30–50 mg/kg stat¹ ◦ May start with 30 mg/kg, followed by 20 mg/kg after 20 minutes if required² 	
	Preparation <ul style="list-style-type: none"> • Nil required 	
	Administration <ul style="list-style-type: none"> • Rectal • 45–60 minutes prior to procedure 	
Special considerations	<ul style="list-style-type: none"> • Contraindicated <ul style="list-style-type: none"> ◦ Severe cardiac disease⁵ • Caution if: <ul style="list-style-type: none"> ◦ Gastritis ◦ Acute porphyrias ◦ Renal and hepatic dysfunction⁵ ◦ Used with other CNS depressant⁵ • Short term use only—not recommended if repeat dosing necessary⁵ (half-life of active metabolite prolonged in neonates; repeated administration may lead to accumulation) • Duration of action 4–8 hours⁵ • No analgesic properties • Use rectal route only if oral route not available as absorption variable and erratic • Schedule 4 (S4) medicine 	
Monitoring	<ul style="list-style-type: none"> • Heart and respiratory rate⁵ for up to 24 hours post-procedure • Level of sedation 	
Compatibility	<ul style="list-style-type: none"> • Nil known 	
Incompatibility	<ul style="list-style-type: none"> • Nil known 	
Interactions	<ul style="list-style-type: none"> • Central nervous system (CNS) depressants <ul style="list-style-type: none"> ◦ Additive CNS depression with other CNS depressants (e.g. barbiturates, opiates, benzodiazepines⁵) • IV frusemide administration after chloral hydrate reported to produce a hypermetabolic state with symptoms of diaphoresis, flushing and variable blood pressure⁵ 	
Stability	<ul style="list-style-type: none"> • Store below 25 °C. Protect from light⁵ 	

Side effects	<ul style="list-style-type: none"> • Post-procedural bradycardia and respiratory depression (particularly at lower gestations and birth weight)^{6,7} • Gastrointestinal upset and irritation • CNS excitement instead of sedation • Hypotension, respiratory and myocardial suppression, arrhythmias, especially with toxicity • Tolerance and physical dependence possible with prolonged use⁵
Actions	<ul style="list-style-type: none"> • Sedative, hypnotic, CNS depressant⁵
Abbreviations	CNS: central nervous system; CT: computerised tomography; EEG: electroencephalogram; IV: intravenous; MRI magnetic resonance imaging;
Keywords	chloral hydrate, neonatal procedural sedation, sedative

The Queensland Clinical Guideline *Neonatal Medicines* is integral to and should be read in conjunction with this monograph. Refer to the disclaimer. Destroy all printed copies of this monograph after use.

References

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3. Litman RS, Soin K, Salam A. Chloral hydrate sedation in term and preterm infants: an analysis of efficacy and complications. *Anesth Analg* 2010;110(3):739-46.
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6. Allegaert K, Daniels H, Naulaers G, Tibboel D, Devlieger H. Pharmacodynamics of chloral hydrate in former preterm infants. *Eur J Pediatr* 2005;164(7):403-7.
7. Cote CJ. Safety after chloral hydrate sedation of former preterm and term infants for magnetic resonance imaging: are the data clear? *Anesth Analg* 2010;110(3):671-3.

Document history

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