

Methotrimeprazine HCl (Nozinan®) Injection Shortage

Suppliers of methotrimeprazine HCl injection in Canada¹:

DIN	Brand Name	Manufacturer	Status as of 13 Oct 2017
01927698	Nozinan Inj 25/ml	AVT	Back-ordered; Expected availability date: 07 Nov 2017 ²

Health Canada-approved indications for injectable methotrimeprazine³:

- treatment of psychotic disturbances: acute and chronic schizophrenias, senile psychoses, manic-depressive syndromes
- treatment of moderate to severe pain
- treatment of nausea and vomiting of central origin
- management of insomnia

Methotrimeprazine may also be used for^{4,5}:

- control of agitation in palliative care patients or patients with acute brain injury
- sedation: pre-surgically, in ICU or in palliative care patients

Alternative dosage forms of methotrimeprazine^{1,2}:

- oral tablets: 2 mg, 5 mg, 25 mg, 50 mg (AAP)

Therapeutic Alternatives for Injectable Methotrimeprazine

1. Acute psychotic disturbance^{6,7}

Drug/ROA	Dose	Comments
Haloperidol IM	2-5 mg (0.5-1 mg elderly) q4-8h prn. Max 20 mg/d (5 mg elderly)	Haloperidol 5 mg IM + lorazepam 2 mg IM more effective than haloperidol alone.
Zuclopenthixol acetate IM	50-150 mg q2-3d prn up to 400 mg cumulative dose or 4 injections (whichever first)	Do not use in antipsychotic-naïve patients. # injections needed may be ↓ by this formulation in severe agitation &/or aggression.
Olanzapine IM*	2.5-10 mg; if needed: 2 nd dose 5-10 mg 2h after 1 st , 3 rd dose ≥4h after 2 nd Up to 30 mg and no more than 3 injections/24h	Has only been studied in mildly to moderately agitated patients. Efficacy ~haloperidol with less EPS.
Risperidone ODT*PO	2 mg	In trial risperidone ODT 2 mg PO + lorazepam 2mg PO ~ haloperidol 5 mg IM + lorazepam 2 mg IM regarding psychotic agitation. ⁸ If patient willing & able to take PO.

d=day; EPS = extrapyramidal symptoms; h=hour; IM=intramuscular; ODT=oral disintegrating tablet; PO = oral; prn=as needed; q=every; ROA= route of administration. * Not currently stocked at McKesson.²

2. Moderate to severe pain⁹

Drug/ROA	Dose	Comments
Ibuprofen IV* ¹⁰	400-800 mg infusion q6h prn Max recommended: 2400 mg Do not exceed 3200 mg	Intended as post-operative adjunct to parenteral opioids. Infuse over 30 min; Use beyond 24h needs to be justified.
Ketorolac IM or IV	10-30 mg q4-6h up to 120 mg/d	30 mg ~ 12 mg morphine. Limit use to 5 days.
Opioids: Fentanyl SL, IM, IV Hydromorphone PR*, IM, IV, SC Morphine PR, IM, IV, SC	See individual monographs	
d=day; h=hour; IM=intramuscular; IV=intravenous; min=minute; PR = rectal; prn= as needed; q=every; ROA= route of administration; SC= subcutaneous; SL= sublingual. *Not currently stocked at McKesson. ²		

3. Nausea and Vomiting of Central Origin¹¹

Drug/ROA	Dose	Comments
Metoclopramide IV, SC [^]	10-20 mg TID-QID prn	
Haloperidol IM, IV	0.5-2 mg q12h prn	
Chlorpromazine IM*, IV*	25-50 mg q3-4h prn	
Prochlorperazine IM*, IV*	5-10 mg BID-TID prn	
Ondansetron ODF, IV	PO: 16-24 mg/day divided q6-8h. IV: initial: up to 16 mg over 15 min; then: ≤ 8 mg at 4h and 8h prn	Potential serotonin syndrome or NMS-like events when combined with serotonergic or neuroleptic drugs.
BID=twice daily; d=day; h=hour; IM=intramuscular; IV=intravenous; min=minute; NMS=neuroleptic malignant syndrome; ODF=oral disintegrating film; PO=oral; prn=as needed; q=every; QID=4 times daily; ROA=route of administration; SC=subcutaneous; TID= 3 times daily.*Not currently stocked at McKesson. ² ^No Canadian products officially indicated for SC route ¹ but safety/efficacy have been established. ¹²		

4. Agitation

Drug/ROA	Dose	Comments
Terminal agitation, palliative¹²		
Midazolam SC [^]	10 mg/24h CSCI and 2.5-10 mg SC prn; ↑ dose prn (10-60 mg/24h CSCI common)	
Lorazepam IV, SC [^]	1-4 mg IV stat; 4-20 mg/24h CIVI or 1-2 mg SC q6-8h prn	Sometimes used instead of midazolam; generally used in conjunction with antipsychotic.
Haloperidol SC [^]	2.5-10 mg stat and q1h prn (1-5 mg q1h in elderly) Maintenance: 10-15 mg/24h CSCI	Add to midazolam if >30 mg/24h required
Brain Injury^{13,14}		
Propranolol PO	20-40 mg/d; ↑ by 20 mg/d up to 640 mg/d	These agents have the most evidence. ¹³ If PO not possible, consider antipsychotics.
Carbamazepine PO	200-300 mg BID-TID	
Divalproex PO	250-500 mg TID	
BID = twice daily; CSCI=continuous subcutaneous infusion; CIVI=continuous intravenous infusion; d=day; h=hour; IM=intramuscular; IV=intravenous; PO= oral; prn=as needed; q=every; ROA=route of administration; SC=subcutaneous; stat=immediately; TID=3 times daily. ^ No Canadian products officially indicated for SC route ¹ but safety/efficacy have been established. ¹²		

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