

MEPERIDINE

Health Canada approved products¹:

Company	Brand Product	Strength
SANOFI-AVENTIS CANADA INC.	DEMEROL TABLETS	50 MG
SANDOZ CANADA INCORPORATED	MEPERIDINE HYDROCHLORIDE INJECTION USP	75 MG / ML
SANDOZ CANADA INCORPORATED	MEPERIDINE HYDROCHLORIDE INJECTION USP	50 MG / ML
SANDOZ CANADA INCORPORATED	MEPERIDINE HYDROCHLORIDE INJECTION USP	100 MG / ML

Indications:

- Due to potentially severe adverse reactions, the use of meperidine for pain management is being discouraged. It is recommended that oral meperidine be removed from hospital pharmacy formularies.²
- Injectable meperidine use should be restricted to:
 - Prevention and treatment of drug-induced or blood product-induced rigors (eg, amphotericin B, platelets)
 - Treatment of postoperative shivering
 - Short term pain management in individuals with normal renal, hepatic, and CNS function where alternative opioids are contraindicated (eg, drug allergy). Dose not to exceed 600 mg in 24 hours or duration of 48 hours.²

Alternatives:

- For pain control, opioids such as *morphine*, *hydromorphone* and *fentanyl*.^{2,3}
- For shivering control, consider the following alternatives⁴:
 - High efficacy, NNT = 3: *ketamine* 0.25–0.75 mg/kg (IV), 1 mg/kg (IM); *dexmedetomidine* 1 µg/kg (IV); *granisetron* 40 µg/kg (IV) to 3 mg (IV), and *physostigmine* 0.04 mg/kg to 2 mg (IV)
 - Moderate efficacy, NNT = 4: magnesium sulfate 4 g (IV), 50 mg to 500 mg (epidural)
 - Lower efficacy, NNT = 5 – 9: dexamethasone 0.6 mg/kg or 8 mg (IV), fentanyl 1.7 µg/kg (IV) 20–25 ug (epidural)

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References:

1. Health Canada. Drug Product Database. Available at <http://webprod5.hc-sc.gc.ca/dpd-bdpp/index-eng.jsp>. Accessed January 2013.
2. ISMP. Meperidine (Demerol®): Issues in Medication Safety. ISMP Canada Safety Bulletin 2004;4:Issue 8.
3. DrugLine – The Pharmacy & Therapeutics (P&T) Committee Newsletter 2012;19, No. 3 November/December, pg 2.
4. Park, SM et al. Efficacy spectrum of antishivering medications: Meta-analysis of randomized controlled trials. Crit Care Med 2012;40:3070–3082.