ADULT MEDICATION GUIDELINE	
Methoxyflurane **(Penthrox®)**	
Scope (Staff):	Clinical staff working in WNHS Outpatient Clinics, Inpatient Wards, Theatres and Emergency Centre
Scope (Area):	WNHS KEMH and OPH areas where minor procedures are performed
This document should be read in conjunction with the Disclaimer.	

Quick Links

Dose	Administration	Monitoring	Pregnancy and Breastfeeding

Restrictions

Formulary: Restricted

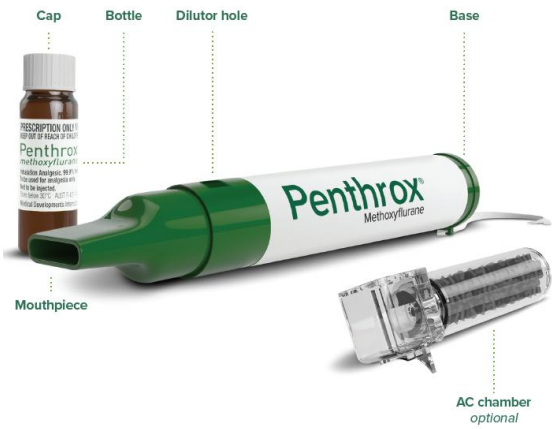
Medication Class

Simple analgesic; belongs to the fluorinated hydrocarbon group of volatile anaesthetic agents. At low concentrations the inhaled vapour provides analgesia in stable, conscious patients.

Presentation

Combination pack of:

- Inhalation solution of methoxyflurane 99.9% (999 mg/g) (3 mL bottle)
- Penthrox® Inhaler
- Activated Carbon (AC) chamber



Storage

Store at room temperature, below 30°C

Dose

Adjunct pain relief during minor procedures

Inhalation:

Half to 1 bottle (1.5 to 3 mL), vaporised in a Penthrox® Inhaler (see Administration for further details). Use the lowest effective dose for the shortest duration possible. On finishing the initial bottle, another bottle may be used.

Maximum daily dose: 2 bottles (6 mL)

Treatment course maximum dose: 5 bottles (15 mL) per week

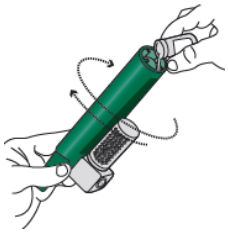
Administration

Inhalation

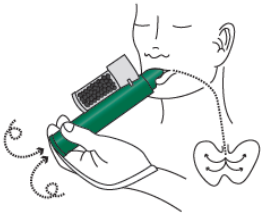
1. Insert the Activated Carbon (AC) Chamber into the dilutor hole on the top of the PENTHROX® Inhaler.

2. Holding the bottle upright, loosen the cap by rotating the PENTHROX® Inhaler base by a ½ turn, then remove the cap

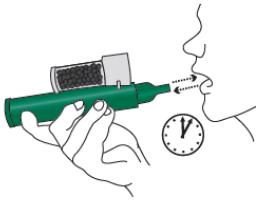
3. Tilt the PENTHROX® Inhaler to a 45° angle and pour the contents of one bottle into the base *whilst rotating*.



4. Place wrist loop over patient's wrist and instruct the patient to:
    - Seal their lips around the mouthpiece; inhale *gently* for the first few breaths
    - Then, inhale and exhale *normally* through the inhaler (any exhaled methoxyflurane is adsorbed in the AC chamber)

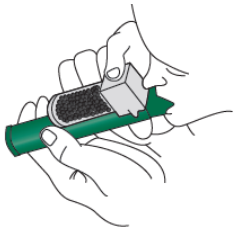


    - Inhale *intermittently* to achieve adequate analgesia (continuous administration will reduce analgesia duration)



    - Assess their own level of pain and titre the amount of methoxyflurane inhaled for adequate pain control.

- Cover the dilutor hole during inhalation if stronger analgesia is required



5. After dose has been administered, replace cap onto PENTHROX® bottle. Place used PENTHROX® Inhaler *and* used bottle in sealed plastic bag and dispose of per WNHS Return and Disposal of Medications Policy and Procedure

Monitoring

- The patient is not to be left unattended during methoxyflurane use
- Continuous pulse oximetry
- The following observations should be conducted **every 5 minutes, during** administration and for **10 minutes** after cessation of methoxyflurane,
  - Heart rate
  - Respiratory Rate
  - Sedation score (0-3)
  - Pain score (0-10)
  - Oxygen Saturation
- In treatment which continues for more than a week, renal function should be monitored twice weekly
- Patients should be observed for signs of drowsiness, pallor, and muscle relaxation following methoxyflurane administration.
- **Driving and Machinery:** Patient should not drive or operate heavy machinery for 24 hours following methoxyflurane use due to potential drowsiness or dizziness.

Pregnancy

1st Trimester: Considered safe to use

2nd Trimester: Considered safe to use

3rd Trimester: Considered safe to use

Breastfeeding

Considered safe to use

Comments

The Penthrox® Inhaler is a single patient use device. The same patient may reuse the device; however, it is not to be shared between different patients.

Onset of pain relief achieved after 6–10 breaths and continues for several minutes after stopping inhalation.

A 3 mL dose of methoxyflurane provides analgesia for approximately 20–30 minutes with continuous use, and for up to 1 hour with intermittent use.

Covering the dilutor hole on top of the Penthrox® Inhaler increases the concentration of methoxyflurane inhaled.

Methoxyflurane is a schedule 4 medicine; prescription and administration must be documented appropriately.

Not for use in active labour, see WNHS Clinical Guideline Pain Management - Obstetrics

Related Policies, Procedures & Guidelines

WNHS Clinical Practice Guidelines:

Pain Management

Pain Management - Obstetrics

Contraception

WNHS Pharmaceutical and Medicines Management Guidelines:

WNHS Return and Disposal of Medications Policy and Procedure

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