

ANAESTHETICS, GENERAL > VOLATILE LIQUID ANAESTHETICS

Volatile halogenated anaesthetics

IMPORTANT SAFETY INFORMATION

Should only be administered by, or under the direct supervision of, personnel experienced in their use, with adequate training in anaesthesia and airway management, and when resuscitation equipment is available.

- **CONTRA-INDICATIONS** Susceptibility to malignant hyperthermia
- **CAUTIONS** Can trigger malignant hyperthermia · raised intracranial pressure (can increase cerebrospinal pressure)
- **SIDE-EFFECTS**
 - ▶ **Common or very common** Agitation · apnoea · arrhythmias · chills · cough · dizziness · headache · hypersalivation · hypertension · hypotension · nausea · respiratory disorders · vomiting
 - ▶ **Uncommon** Hypoxia
 - ▶ **Frequency not known** Breath holding · cardiac arrest · haemorrhage · hepatic disorders · hyperkalaemia · malignant hyperthermia · QT interval prolongation · rhabdomyolysis · seizure
- **ALLERGY AND CROSS-SENSITIVITY** Can cause hepatotoxicity in those sensitised to halogenated anaesthetics.
- **DIRECTIONS FOR ADMINISTRATION** Volatile liquid anaesthetics are administered using calibrated vaporisers, using air, oxygen, or nitrous oxide-oxygen mixtures as the carrier gas. To prevent hypoxia, the inspired gas mixture should contain a minimum of 25% oxygen at all times.
- **PATIENT AND CARER ADVICE**

Driving and skilled tasks Patients given sedatives and analgesics during minor outpatient procedures should be very carefully warned about the risks of driving or undertaking skilled tasks afterwards. For a short general anaesthetic, the risk extends to **at least 24 hours** after administration. Responsible persons should be available to take patients home. The dangers of taking **alcohol** should also be emphasised.

Desflurane

● INDICATIONS AND DOSE

Induction of anaesthesia (but not recommended)

- ▶ BY INHALATION
- ▶ **Adult:** 4–11 %, to be inhaled through specifically calibrated vaporiser

Maintenance of anaesthesia (in nitrous oxide-oxygen)

- ▶ BY INHALATION
- ▶ **Adult:** 2–6 %, to be inhaled through a specifically calibrated vaporiser

Maintenance of anaesthesia (in oxygen or oxygen-enriched air)

- ▶ BY INHALATION
- ▶ **Adult:** 2.5–8.5 %, to be inhaled through a specifically calibrated vaporiser



- **INTERACTIONS** → Appendix 1: volatile halogenated anaesthetics
- **SIDE-EFFECTS**
 - ▶ **Common or very common** Coagulation disorder · conjunctivitis

- ▶ **Uncommon** Myalgia · myocardial infarction · myocardial ischaemia · vasodilation
- ▶ **Frequency not known** Abdominal pain · asthenia · heart failure · hypokalaemia · malaise · metabolic acidosis · pancreatitis acute · shock · skin reactions · ventricular dysfunction · visual acuity decreased
- **PREGNANCY** May depress neonatal respiration if used during delivery.
- **BREAST FEEDING** Breast-feeding can be resumed as soon as mother has recovered sufficiently from anaesthesia.

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Inhalation vapour

▶ Desflurane (Non-proprietary)

Desflurane 1 ml per 1 ml Desflurane volatile liquid | 240 ml  

Isoflurane

12-Dec-2019

● INDICATIONS AND DOSE

Induction of anaesthesia (in oxygen or nitrous oxide-oxygen)

- ▶ BY INHALATION
- ▶ **Adult:** Initially 0.5 %, increased to 3 %, adjusted according to response, administered using specifically calibrated vaporiser

Maintenance of anaesthesia (in nitrous oxide-oxygen)

- ▶ BY INHALATION
- ▶ **Adult:** 1–2.5 %, to be administered using specifically calibrated vaporiser; an additional 0.5–1 % may be required when given with oxygen alone

Maintenance of anaesthesia in caesarean section (in nitrous oxide-oxygen)

- ▶ BY INHALATION
- ▶ **Adult:** 0.5–0.75 %, to be administered using specifically calibrated vaporiser

- **INTERACTIONS** → Appendix 1: volatile halogenated anaesthetics
- **SIDE-EFFECTS** Carboxyhaemoglobinaemia · chest discomfort · cognitive impairment · delirium · dyspnoea · ileus · mood altered (that can last several days) · myoglobinuria · skin reactions
- **PREGNANCY** May depress neonatal respiration if used during delivery.
- **BREAST FEEDING** Breast-feeding can be resumed as soon as mother has recovered sufficiently from anaesthesia.



- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Inhalation vapour

▶ Isoflurane (Non-proprietary)

Isoflurane 1 ml per 1 ml Isoflurane inhalation vapour | 250 ml  £35.29 (Hospital only)

▶ AErrane (Baxter Healthcare Ltd)

Isoflurane 1 ml per 1 ml AErrane volatile liquid | 250 ml  

Nitrous oxide

10-Mar-2020

● INDICATIONS AND DOSE

Maintenance of anaesthesia in conjunction with other anaesthetic agents

- ▶ BY INHALATION
- ▶ **Adult:** 50–66 %, to be administered using suitable anaesthetic apparatus in oxygen