Alfaxan® User Guide

Pre-anaesthetic assessment to recovery
### Premedication

<table>
<thead>
<tr>
<th>Drug</th>
<th>Time to peak sedation</th>
<th>Duration of action</th>
<th>Reversal?</th>
<th>Analgesia?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acepromazine</td>
<td>35-40 minutes i.m.</td>
<td>1-2 hours</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Atropine</td>
<td>20-30 minutes i.m.</td>
<td>1-1.5 hours</td>
<td>Yes – with naloxone</td>
<td>No</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>2-5 minutes i.v.</td>
<td>4-6 hours</td>
<td>No No</td>
<td>No</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>20-30 minutes i.m.</td>
<td>2-3 hours</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Methadone</td>
<td>10-15 minutes i.m.</td>
<td>3-4 hours</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Midazolam</td>
<td>5 minutes i.v.</td>
<td>2-3 hours</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Pethidine</td>
<td>15-20 minutes i.v.</td>
<td>1-1.5 hours</td>
<td>Yes – with flumazenil</td>
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<td>Morphine</td>
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- Administer by correct route and at appropriate time.
- Allow enough time for peak effect.

### Pre-anaesthetic assessment

1. **Full clinical examination**
2. **Suitable for anaesthesia?**
3. **Assign ASA score**
4. **Further tests?**
5. **Stabilise?**
6. **Re-assess? (consider referral)**

#### ASA Physical Status Classification System

<table>
<thead>
<tr>
<th>Physical Status</th>
<th>Description</th>
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<tr>
<td>1</td>
<td>Normal healthy patient</td>
</tr>
<tr>
<td>2</td>
<td>A patient with mild systemic disease</td>
</tr>
<tr>
<td>3</td>
<td>A patient with moderate systemic disease</td>
</tr>
<tr>
<td>4</td>
<td>A patient with severe systemic disease</td>
</tr>
<tr>
<td>5</td>
<td>A moribund patient who is not expected to survive without the operation</td>
</tr>
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</table>

It is essential that all patients are classified before any premedication is applied, and that the dose administered is appropriate. The times given are approximate guidelines only. For details on use please refer to the individual product SPCs. Where products are not registered in the UK, veterinarians are advised to abide by the VMD guidance on the Cascade.

*Note that the duration of action of many of these drugs will vary between species and will depend on the dose administered. The times given are approximate guidelines only. For details on use please refer to the individual product SPCs.*

### Induction

- **Take a ‘pre-induction’ heart rate**
- **Ensure catheter is intravenous and patent**
- **Breathing**
  - (likely to be continuous)
  - **Heart Rate**
    - (Alfaxan® is thought to minimally affect cardiac function at clinical doses)
  - **Anaesthetic Depth**
    - (eye position, blink reflex, jaw & tongue tone)

### Transition

- **Spontaneous ventilation?**
  - **adequate duration of action for smooth & unhurried transition**
  - **stable or increased heart rate**
  - **pulse quality**
  - **mucous membrane colour**

### Maintenance

- **Monitor all parameters**
  - **inadequate analgesia?**
  - **inadequate hypnosis?**
  - **provide further analgesia via a multi-modal approach**
  - **consider deepening anaesthesia with IV Alfaxan® or volatile agent as appropriate**

### Recovery

- **Wait**
  - If SPO2, pulse, or mucous membrane colour signs indicate the need, start IPPV

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**Precautions:**

- Contraindicated i.v.
- Not recommended i.v.
- Administer by correct route and at appropriate time.
- Allow enough time for peak effect.

**Further tests?**

- Does the animal look premedicated?
  - **YES**
  - Proceed to Induction
  - **NO**
  - Further doses? More time? RE-ASSESS

**Further tests?**

- Monitor all parameters
  - **patient responding to stimuli?**
  - **inadequate analgesia?**
  - **inadequate hypnosis?**

**Further tests?**

- Provide further analgesia via a multi-modal approach
- Consider deepening anaesthesia with IV Alfaxan® or volatile agent as appropriate

**Further tests?**

- Monitor all parameters
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**Further tests?**

- Monitor all parameters
  - **patient responding to stimuli?**
  - **inadequate analgesia?**
  - **inadequate hypnosis?**

---

**Induction**

- **Draw up the full dose of Alfaxan®**
  - 2 mg/kg (0.2 mL/kg) for dogs
  - 5 mg/kg (0.5 mL/kg) for cats
  - 4 mg/kg (0.4 mL/kg) for rabbits
  - Label the syringe

- **Take a ‘pre-induction’ heart rate**
- **Ensure catheter is intravenous and patent**
- **Breathing**
  - (likely to be continuous)
  - **Heart Rate**
    - (Alfaxan® is thought to minimally affect cardiac function at clinical doses)
  - **Anaesthetic Depth**
    - (eye position, blink reflex, jaw & tongue tone)

**Transition**

- **Spontaneous ventilation?**
  - **adequate duration of action for smooth & unhurried transition**
  - **stable or increased heart rate**
  - **pulse quality**
  - **mucous membrane colour**

**Maintenance**

- **Monitor all parameters**
  - **inadequate analgesia?**
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**Recovery**

- **Wait**
  - If SPO2, pulse, or mucous membrane colour signs indicate the need, start IPPV
Summary of Product Characteristics

1. Name of the veterinary medicinal product: ALFAXAN® 10 mg/ml solution for injection for dogs, cats and pet rabbits.
2. Qualitative and quantitative composition: Active substance: alfaxalone 10 mg/ml. For the full list of excipients, see section 6.1.
3. Pharmacodynamic and pharmacokinetic properties: See section 5.1. The clinical pharmacokinetics of alfaxalone are distinct from other sedative hypnotics, such as benzodiazepines and opioids. Alfaxalone is a non-competitive, non-saturable and non-reversible NMDA receptor antagonist that acts through the inhibitory system involving the pre-synaptic gamma-aminobutyric acid (GABA) receptor. Depending on the species, in vitro NMDA receptor studies have demonstrated that alfaxalone is a more potent blocker of the NMDA receptor than phencyclidine (PCP) and anesthetic doses of ketamine. In rodents, alfaxalone demonstrates a lower potency at the GABA A receptor than diazepam, midazolam or ketamine. In cats, alfaxalone is less potent than diazepam and midazolam.

4.1 Target species: Dogs, cats and non food rabbits.

4.2 Indications for use, specifying species, route of administration, dosage forms and strength: As an induction agent prior to inhalation anaesthesia in cats, dogs and non food rabbits. As a sedative hypnotic for the induction of anaesthesia prior to delivery of puppies by caesarean section. In these studies, dogs were not anaesthetised. Try not to move an animal during emergence from anaesthesia. Ensure environment is quiet, warm and comfortable. Consider more analgesia and minimise any stimulation.

4.3 Contraindications: (i) Hypersensitivity to benzodiazepines, alfaxalone or other substances containing alfaxalone. (ii) Special precautions to be taken when using the veterinary medicinal product in animals less than 12 weeks of age (dogs and cats) and 16 weeks of age (rabbits) when using the veterinary medicinal product in pregnant animals or on the reproductive performance of their offspring. The product should be used in pregnant animals, or on the reproductive performance of their offspring. The product should be used in pregnant animals.

4.4 Special warnings and precautions for use: In the event of accidental self-injection, immediate medical attention should be sought. Minimise any stimulation. Try not to move an animal during emergence from anaesthesia. Ensure environment is quiet, warm and comfortable. Consider more analgesia and minimise any stimulation.

4.5 Special precautions for storage: Keep the container in the outer carton. Store in the carton to protect from light.

4.6 Pharmaceutical particulars: Solution for injection Clear colourless solution

6.6 Special precautions for disposal and other specific handling information: The packaging material should be disposed of in accordance with local requirements.

6.7 Interactions: Benzodiazepines diazepam, midazolam hydrochloride

Phenothiazines acepromazine maleate

Drug Class Examples
Phenothiazines
acepromazine maleate
Anticholinergic agents
tropicamide
Benzodiazepines
diazepam, midazolam hydrochloride

Alpha-2-adrenoceptor antagonists

Table: Dose for each 10 minutes maintenance

<table>
<thead>
<tr>
<th>Species</th>
<th>mg/kg/hour</th>
<th>mg/kg/min</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dogs</td>
<td>8 - 9</td>
<td>0.010 - 0.012</td>
</tr>
<tr>
<td>CATS</td>
<td>6 - 7</td>
<td>0.009 - 0.010</td>
</tr>
<tr>
<td>rabbits</td>
<td>10 - 11</td>
<td>0.011 - 0.013</td>
</tr>
</tbody>
</table>

6.2 Incompatibilities: Glucagon, human

6.3 Special precautions for disposal and other specific handling information: DOGS CATS

6.6 Special precautions for disposal and other specific handling information: The packaging material should be disposed of in accordance with local requirements.

8.4 Adverse reactions (frequency and seriousness): In preclinical studies:

Adverse reactions: 4.3 Contraindications: (i) Hypersensitivity to benzodiazepines, alfaxalone or other substances containing alfaxalone. (ii) Special precautions to be taken when using the veterinary medicinal product in animals less than 12 weeks of age (dogs and cats) and 16 weeks of age (rabbits) when using the veterinary medicinal product in pregnant animals or on the reproductive performance of their offspring. The product should be used in pregnant animals, or on the reproductive performance of their offspring. The product should be used in pregnant animals.

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