Alfentanil (Amber)*

**Introduction**

**Description:** Potent opioid, rapid onset and short duration of action. Third-line opioid: only for use with specialist advice.

**Caution:** Do not confuse with Fentanyl. Fentanyl is four times more potent than alfentanil.

**Preparations**

<table>
<thead>
<tr>
<th></th>
<th>Injection</th>
<th>Ampoules</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>1mg in 2ml</td>
<td>• Used as a subcutaneous infusion or sublingually. (The ampoules can be opened and administered sublingually).</td>
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<tr>
<td></td>
<td>5mg in 10ml (not routinely used)</td>
<td>• A high concentration preparation (5mg in 1ml) can be ordered.</td>
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<tr>
<td></td>
<td>5mg in 1ml (high strength)</td>
<td>Caution with high strength preparation; refer to local policy for its use.</td>
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<tr>
<td>Sublingual/buccal spray</td>
<td>5mg/5ml (1 metered dose = 140 micrograms)</td>
<td>Pharmacist can order spray on a named patient basis if advised by a palliative care specialist (check local NHS board for availability).</td>
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<tr>
<td></td>
<td>5ml spray</td>
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**Indications**

- Third-line injectable opioid for moderate to severe opioid responsive pain in patients unable to tolerate morphine, diamorphine or oxycodone due to persistent side effects (for example sedation, confusion, hallucinations, itch). Refer to Pain Management, Choosing and Changing Opioids guidelines).

- Injectable analgesic for moderate to severe, opioid responsive pain in patients with Stage 4-5 chronic kidney disease (eGFR <30ml/min), or severe acute renal impairment.

- Episodic/incident pain:
  - pain often related to a particular event (for example movement, dressing changes); sudden in onset, can be severe, but may not last long
  - different from breakthrough pain occurring when the dose of regular analgesic has worn off
  - assessed and treated independently of the regimen used to manage any continuous/background pain.
Cautions

- Liver impairment: reduced clearance. Dose reduction of 30-50% may be necessary.
- Renal impairment: no dose reduction needed. Not removed by dialysis.

Drug interactions

- Hepatic metabolism is reduced by grapefruit juice and a number of medications, for example fluconazole, clarithromycin, erythromycin: refer to British National Formulary (BNF).
- Alcohol and central nervous system depressants increase side effects.
- Anticonvulsants may reduce its effect. Refer to BNF.

Side effects

Similar to other opioids: nausea, dizziness, sedation, delirium, rarely respiratory depression.

Dose and administration

1. **Alfentanil for moderate to severe opioid responsive pain**
   - Continuous subcutaneous infusion in a CME T34 syringe pump over 24 hours.
   - Stability and compatibility – refer to CME T34 syringe pump compatibility tables.
   - Titrate on the advice of a specialist.
   - Prescribe doses of over 1000micrograms in milligrams (mg).
   - Prescribe 1/6th to 1/10th of the 24 hour dose hourly for breakthrough pain as alfentanil has a very short duration of action. The same dose can be given subcutaneously or sublingually. Sometimes other opioids with a longer duration of action are used for breakthrough pain. If 3 or more doses have been given within 4 hours with little or no benefit seek urgent advice or review. If more than 6 doses are required in 24 hours seek advice or review.

2. **Alfentanil for episodic/ incident pain**
   - Starting dose: 100micrograms.
   - Give a dose five minutes before an event likely to cause pain, for example, a painful dressing change; repeat if needed.

1 Indicates this medication is associated with QT prolongation
- Increase dose according to response. This dose is titrated independently of the background dose.
- Give by subcutaneous injection or sublingually at the same dose.
- Consider an alfentanil spray if the patient is being discharged home (check local health board for availability).

**Dose conversions**

Alfentanil is approximately (≈) 30 times more potent than oral morphine.

<table>
<thead>
<tr>
<th>Oral morphine 30mg</th>
<th>≈ subcutaneous alfentanil 1mg (1000micrograms)</th>
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</thead>
<tbody>
<tr>
<td>Subcutaneous morphine 15mg</td>
<td>≈ subcutaneous alfentanil 1mg (1000micrograms)</td>
</tr>
<tr>
<td>Subcutaneous diamorphine 10mg</td>
<td>≈ subcutaneous alfentanil 1mg (1000micrograms)</td>
</tr>
<tr>
<td>Oral oxycodone 15mg</td>
<td>≈ subcutaneous alfentanil 1mg (1000micrograms)</td>
</tr>
<tr>
<td>Subcutaneous oxycodone 7.5mg</td>
<td>≈ subcutaneous alfentanil 1mg (1000micrograms)</td>
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</tbody>
</table>

A patient whose pain is controlled on a subcutaneous alfentanil infusion can be converted to a fentanyl patch. Apply the patch and stop the infusion 12 hours later. Seek advice for dose conversions as cross titration may be necessary.

- Dose conversions should be conservative and doses rounded down.
- Monitor the patient carefully so that the dose can be adjusted if necessary.
- If the patient has opioid toxicity, reduce dose by approximately 1/3rd when changing opioid (refer to Choosing and Changing Opioids guideline).

**Practice points**

- The community pharmacist, GP and community nurse should be informed as preparations may not be readily available.
- The unscheduled care service should be informed that the patient is receiving this third-line opioid.
- Alfentanil can be prescribed by the patient’s GP for the indications listed in liaison with local palliative care specialists.

**Resources**
Professional

References