Buprenorphine Patches (Amber)*

* Colour code:

Amber – For medicines normally initiated by a specialist but may be used by generalists

Introduction

Description: Potent synthetic opioid analgesic – partial agonist/antagonist - in a topical patch lasting 72 hours (3 days), 96 hours (4 days) or 168 hours (7 days).

Preparations

<table>
<thead>
<tr>
<th>Strength of patch</th>
<th>Licensed indication</th>
<th>Frequency of patch application</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 microgram, 10 microgram, 15 microgram and 20 microgram per hour</td>
<td>Treatment of non-malignant pain of moderate intensity when an opioid is necessary for obtaining adequate analgesia</td>
<td>Replace patch(es) every 7 days.</td>
</tr>
<tr>
<td>35 microgram, 52.5 microgram and 70 microgram per hour</td>
<td>Treatment of moderate to severe cancer pain and severe pain which does not respond to non-opioid analgesics</td>
<td>Either: Apply a new patch every 72 hours (3 days) Or Apply a new patch after up to 96 hours (4 days). SPC suggests bi-weekly dosing, for example Tuesday and Friday.</td>
</tr>
</tbody>
</table>

It is recommended that patients should ideally stay on the same formulation and should not switch between patches. Consult local guidance for preferred brand.

Note that for small dose titrations matrix patches may be cut diagonally (unlicensed practice). Seek specialist advice.

Indications

- Strong opioid for moderate to severe opioid responsive pain.
- Pain that is stable.
- Oral and subcutaneous routes are not suitable.
• Patient unable to tolerate morphine/diamorphine due to persistent side effects.
• Compliance is poor, but supervised patch application is possible.
• Intolerant of codeine.
• Highly sensitive to strong opioids even at low dose and experiencing opioid toxicity/side effects.
• Known to have compromised renal function.

Patients who require the topical route of administration and where opioid requirements are lower than the lowest initiating strength of fentanyl patch (refer to Choosing and Changing Opioids guideline).

Cautions
• Buprenorphine is a potent opioid analgesic; check the dose carefully.
• 5 microgram/hour buprenorphine patch is equivalent to about 12mg of oral morphine in 24 hours.
• Frail or elderly patients may need lower doses and slower titration.
• Heat/pyrexia increases the absorption of buprenorphine and can cause toxicity. Avoid direct contact with heat (for example hot water bottle, heat pad). Showering is possible as the patches are waterproof, but patients should avoid soaking in a hot bath, sauna or sunbathing. If the patient has a persistent temperature of 39°C or above, the patch dose may need reviewed - use anti-pyretic measures.
• Liver impairment: dose reduction may be needed in severe liver disease.
• Renal impairment: no dose reduction. Buprenorphine is not usually cleared by dialysis.
• If the patient has unstable pain or pain likely to change following treatment, for example radiotherapy, do not start buprenorphine. Seek advice and consider alternative opioids.

Drug interactions
• Hepatic metabolism may be increased by CYP3A4 inducers such as carbamazepine, phenobarbital, phenytoin and rifampicin which will reduce the concentration and efficacy of buprenorphine. Check British National Formulary (BNF).
• Alcohol and central nervous system depressants increase side effects.
• Buprenorphine must not be used in patients receiving Monoamine oxidase inhibitors (MAOIs) or within 2 weeks of discontinuing their use.

Side effects
• Similar to other opioids (dizziness, sedation, delirium), constipation and nausea.
• If signs of opioid toxicity (for example sedation, delirium), remove the patch and seek advice. Buprenorphine will be released from the reservoir and be systemically available for up to 24 hours. Monitor the patient for 24-48 hours.

• Titrated naloxone is only needed for life-threatening, opioid-induced respiratory depression (refer to Naloxone guideline).

Note: Reversal of toxic effects by naloxone may require much higher doses than are usual, for example may require up to 2mg per stat dose. This impacts on providers of Out of Hours services and Scottish Ambulance Service and requires appropriate communication.

An allergic reaction to the patch adhesive can occur – consider switching brand of patch, change opioid or consider one to two doses of a 50-100 micrograms beclometasone dipropionate inhaler on to site prior to application of patch.

Dose and administration

Starting a buprenorphine patch

• Choose a suitable patch - matrix patches allow titration in smaller increments.

• Calculate the dose of buprenorphine from the conversion chart given here or seek advice.

• Patch strengths can be combined to provide an appropriate dose provided they have the same frequency of application.

• Make sure the patient takes another regular opioid for the first 12 hours after the patch is first applied to allow the buprenorphine to reach therapeutic levels:

<table>
<thead>
<tr>
<th>Immediate release (quick acting) oral morphine or oxycodone</th>
<th>Apply patch; continue the immediate release opioid 4 hourly for the next 12 hours.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified release (long acting) oral 12 hourly morphine or oxycodone</td>
<td>Apply patch when the last dose of a 12 hourly, modified release opioid is given.</td>
</tr>
<tr>
<td>Subcutaneous infusion of morphine, diamorphine, oxycodone or alfentanil</td>
<td>Apply the patch and continue the infusion for the next 12 hours, then stop the infusion.</td>
</tr>
</tbody>
</table>

• An immediate release opioid (for example oral morphine or subcutaneous morphine) must be available as required, for breakthrough pain or to treat any opioid withdrawal symptoms (diarrhoea, abdominal pain, nausea, sweating). These can occur during the buprenorphine initiation period due to the variable time to reach steady state. The correct 4 hourly equivalent dose should be used.

Note: DO NOT use short-acting buprenorphine products (for example Temgesic®) for breakthrough pain.
Adjusting the buprenorphine patch dose

- Review the buprenorphine patch dose after 72 hours; drug levels should be at steady state.
- If the patient shows signs of opioid toxicity (drowsiness, confusion), reduce the dose, reassess the pain and seek advice.
- If the patient still has pain which is opioid responsive, titrate the buprenorphine dose in increments depending on the patch type in use. Remember to consider the breakthrough doses used. It will take 12-24 hours for the new dose to take effect so give breakthrough analgesia at the correct dose, as required. If there is a significant increase in the number of breakthrough doses required seek specialist advice.

  - **Changing buprenorphine patches to another opioid: Seek specialist advice.**
  - Buprenorphine is a partial opioid agonist. It is clinically possible to administer opioid agonists for breakthrough analgesia alongside buprenorphine.
  - Switching from buprenorphine patches to fentanyl patches is not routine practice, however 35 micrograms/hour buprenorphine patch is roughly equivalent to 25 micrograms/hour of fentanyl patch and 70 micrograms/hour of buprenorphine patch is roughly equivalent to 50 micrograms/hour fentanyl patch. Seek specialist advice.
  - Consider switching a patient to a fentanyl patch when the maximum dose of 140 micrograms/hour (two buprenorphine 70 microgram/hour patches) has been reached and an increase in dosage is indicated.

Buprenorphine patches in the last days of life

- If a patient is semi-conscious or close to death, continue the buprenorphine patch, changing it according to schedule every 72, 96 or 168 hours.
- If a new, opioid responsive pain develops, use subcutaneous morphine as required for breakthrough pain. Use the conversion chart to calculate the dose of morphine.
- If the patient is known to be renally impaired (eGFR<30ml/min), alfentanil may be a more appropriate choice (refer to Renal Disease in the Last Days of Life guideline).
- After 24 hours, the breakthrough doses of morphine given in that period can be totalled and this dose of morphine administered as a subcutaneous infusion in a syringe pump over the next 24 hours in addition to the buprenorphine patch.

Dose conversions

- All opioid dose conversions are approximate.
- Patients should be monitored closely so that the dose can be adjusted if necessary.
• Manufacturers of the various formulations of buprenorphine have issued different recommendations for dose conversion, as have drug regulatory bodies.

• Buprenorphine is approximately 100 times more potent than oral morphine; the table below provides a guide to dose conversions, but if in doubt seek advice (refer to Choosing and Changing Opioids guideline).

• For doses beyond those stated in the table below, seek specialist advice.

• The table below is based on the use of 1/6th of the 24-hour oral morphine dose for breakthrough dose.

• The preparations for buprenorphine patches may not have an available strength equivalent available. Buprenorphine patches are licensed to be applied whole. In clinical practice where small (less than 5 micrograms/hour) dose titrations are required for safe opioid management and to overcome short term supply issues, patches that are matrix formulation may be cut diagonally however this procedure is unlicensed and specialist advice should be sought. Reservoir patch formulations must not be cut.

• Dispose of the unused part of the patch safely as described in the buprenorphine patch care section.

<table>
<thead>
<tr>
<th>24-hour oral morphine dose</th>
<th>Buprenorphine patch dose (micrograms per hour)</th>
<th>Immediate release oral morphine Suggested breakthrough dose (refer to guidance in dose and administration)</th>
<th>Immediate release oral oxycodone Suggested breakthrough dose (refer to guidance in dose and administration)</th>
<th>Fentanyl patch dose (micrograms per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12mg</td>
<td>5</td>
<td>2mg</td>
<td>1mg</td>
<td>6</td>
</tr>
<tr>
<td>24mg</td>
<td>10</td>
<td>5mg</td>
<td>2mg to 3mg</td>
<td>6-12</td>
</tr>
<tr>
<td>36mg</td>
<td>15</td>
<td>5mg</td>
<td>2mg to 3mg</td>
<td>12</td>
</tr>
<tr>
<td>48mg</td>
<td>20</td>
<td>10mg</td>
<td>5mg</td>
<td>12-18</td>
</tr>
</tbody>
</table>

**Buprenorphine patch care**

• Apply to intact, non-hairy skin on the upper trunk or upper arm; avoid areas treated with radiotherapy, scar tissue or oedematous areas.

• Apply each new patch to a different skin site; clean the skin with water only as soap products can alter absorption. Make sure skin is dry. Following removal of both parts of the protective liner, the patch should be pressed firmly in place with the palm of the hand for approximately 30 seconds, making sure the contact is complete, especially around the edges.

• Record the date, time and site if the patch is changed by different people.
• Change the patch according to brand schedule at about the same time of day.
• Check the patch daily (or as per local guidance) to ensure it is still in place.
• If patch adherence is poor, refer to local guidance for advice. Micropore tape may be recommended; buprenorphine is unsuitable for patients with marked sweating.
• Used patches still contain active drug. When removed, fold the patch in half with the adhesive side inwards. Dispose of it safely (sharps bin for inpatients, domestic waste in the community). Wash your hands after patch changes.

Practice points

• Buprenorphine patches are used for moderate to severe, stable pain.
• Do not change buprenorphine patches to another opioid in a dying patient, continue the buprenorphine patch and use an additional opioid SC as required.
• Do not initiate buprenorphine patches at the end of life when the oral route is no longer available (refer to Care in the Last Days of Life guideline).
• **DO NOT** use more than two patches of a single strength at one time.
• **DO NOT** use short-acting buprenorphine products for breakthrough analgesia.
• The same patch formulation should ideally be prescribed and dispensed consistently for each patient.
• Ensure patients understand the safe use, storage and disposal of the patch, and the importance of not heating the skin under the patch.

References


