Fentanyl Patches (Green)*

Introduction

Description: Potent opioid analgesic in a topical patch lasting 72 hours (on specialist advice some patients may require the patch to be changed every 48 hours).

Preparations

<table>
<thead>
<tr>
<th>Format</th>
<th>Dose</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matrix patch</td>
<td>12, 25, 37.5, 50, 75,100 micrograms/hour</td>
<td>Durogesic D-Trans®, Matrifin®, Fencino®, Mezolar®, Osmanil®, Opiodur®, Yemex®, Mylafent®, Victanyl®</td>
</tr>
<tr>
<td>Reservoir patch</td>
<td>25, 50, 75,100 micrograms/hour</td>
<td>Durogesic®, Tilofyl®, Fentalis®</td>
</tr>
</tbody>
</table>

- It is recommended that patients should ideally stay on the same formulation and should not switch between a matrix and a reservoir patch. Consult local guidance for preferred brand.

Indications

- Second-line opioid for moderate to severe opioid responsive pain.
- Pain must be 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.

Cautions

- Fentanyl is a potent opioid analgesic; check the dose conversion carefully. 100 to 150 times more potent than oral morphine.
- A 25 microgram/hour fentanyl patch is equivalent to about 60mg to 90mg of oral morphine in 24 hours.
- Frail or elderly patients may need lower doses and slower titration.

* Colour code: Green – For medicines routinely initiated and used by generalists
• Heat/pyrexia increases the absorption of fentanyl 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, the patch dose may need reviewed - use anti-pyretic measures.

• **Liver impairment**: dose reduction may be needed in severe liver disease.

• **Renal impairment**: no initial dose reduction. May accumulate gradually over time. Monitor patient and reduce dose. Fentanyl is not usually removed by dialysis.

**Drug interactions**

• Hepatic metabolism is reduced by grapefruit juice and a number of medications (for example fluconazole, clarithromycin, erythromycin): check British National Formulary (BNF).

• Alcohol and CNS depressants increase side effects.

• Anticonvulsants may reduce its effect. Refer to BNF.

• Manufacturers warn of a risk of serotonin toxicity when fentanyl is used in combination with other serotonergic drugs.

**Side effects**

• Similar to other opioids (dizziness, sedation, delirium) but less constipation and possibly less nausea.

• If signs of opioid toxicity (for example sedation, delirium), remove the patch and seek advice. Fentanyl will be released from the site for up to 24 hours. Monitor the patient for 24 to 48 hours.

• Naloxone (in small titrated doses) is only needed for life-threatening respiratory depression (refer to Naloxone guideline). 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 to 100micrograms beclometasone dipropionate inhaler on to site prior to application of patch.

**Dose and administration**

**Starting a fentanyl patch**

• Do not start at end of life.

• Choose a suitable patch - matrix patch allows titration in smaller increments.
• Calculate the dose of fentanyl from the conversion chart given here or seek advice. Patch strengths can be combined to provide an appropriate dose.

• Patches are licensed for dose initiation and titration.

• Make sure the patient takes another regular opioid for the first 12 hours after the patch is first applied to allow the fentanyl to reach therapeutic levels (refer to Switching opioid to fentanyl patch table below).

• An immediate release opioid (for example oral morphine or morphine SC) must be available 1-2 hourly, as required, for breakthrough pain or to treat any opioid withdrawal symptoms (diarrhoea, abdominal pain, nausea, sweating). These can occur during the fentanyl initiation period due to the variable time to reach steady state. The correct 4 hourly equivalent dose should be used.

• Fentanyl is often less constipating than morphine; half dose of any laxative and titrate.

Switching opioid to fentanyl patch

<table>
<thead>
<tr>
<th>Current opioid</th>
<th>Switching procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate release (quick acting) morphine or oxycodone</td>
<td>Apply patch; continue the immediate release opioid 4 hourly for the next 12 hours</td>
</tr>
<tr>
<td>Modified release (long acting) 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>

Adjusting the fentanyl patch dose

• Review the fentanyl patch dose after 72 hours; drug levels will be at steady state.

• If the patient shows signs of opioid toxicity (drowsiness, confusion), reduce the dose and reassess the pain. Seek advice.

• If the patient still has pain which is opioid responsive, titrate the fentanyl dose in 12 to 25 microgram/hour increments depending on the patch strength in use. Remember to include the breakthrough doses used. It will take 12 to 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.

Fentanyl patches in the last days of life

• Continue the fentanyl patch, changing it every 72 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 alfentanil may be a more appropriate choice (eGFR<30ml/min – refer to Renal Palliative Care – 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 SC infusion in a syringe pump over the next 24 hours in addition to the fentanyl patch.

**Switching a fentanyl patch**

• If switching from a fentanyl patch to any other strong opioid by any other route, specialist palliative care advice should be sought.

**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 fentanyl have issued different recommendations for dose conversion, as have drug regulatory bodies.

• Fentanyl is approximately 100 to 150 times more potent than oral morphine; the table below provides a guide to dose conversions, but if in doubt seek advice.

<table>
<thead>
<tr>
<th>24 hour oral morphine dose</th>
<th>Fentanyl patch dose (micrograms per hour)</th>
<th>Immediate release oral morphine&lt;sup&gt;(1)&lt;/sup&gt; Suggested breakthrough dose (refer to guidance in dose and administration above)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30mg to 60mg</td>
<td>12</td>
<td>5mg to 10mg</td>
</tr>
<tr>
<td>60mg to 90mg</td>
<td>25</td>
<td>10mg to 15mg</td>
</tr>
<tr>
<td>90mg to 120mg</td>
<td>37</td>
<td>15mg to 20mg</td>
</tr>
<tr>
<td>120mg to 180mg</td>
<td>50</td>
<td>20mg to 30mg</td>
</tr>
<tr>
<td>180mg to 240mg</td>
<td>62</td>
<td>30mg to 40mg</td>
</tr>
<tr>
<td>240mg to 300mg</td>
<td>75</td>
<td>40mg to 50mg</td>
</tr>
<tr>
<td>300mg to 360mg</td>
<td>87</td>
<td>50mg to 60mg</td>
</tr>
<tr>
<td>360mg</td>
<td>100</td>
<td>60mg</td>
</tr>
</tbody>
</table>

<sup>(1)</sup> The table above is based on the use of 1/6th of the 24 hour oral morphine dose.

• Converting from fentanyl given by IV infusion or via a PCA device. This conversion is not routine practice. Liaise with a specialist. If pain is stable the patient may be considered for conversion to a fentanyl patch.

**Fentanyl 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 every 72 hours 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, check local guidance for advice – micropore tape may be recommended; fentanyl 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

- Fentanyl patches are used for moderate to severe, stable pain.
- Fentanyl patches are licensed to be applied whole. In clinical practice where small (less than 12 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 fentanyl patch care section.
- Do not change fentanyl patches to another opioid in a dying patient, continue the fentanyl patch and use an additional opioid as required via CSCI.
- Do not initiate fentanyl patches at the end of life when the oral route is no longer available.
- Ensure patients understand the safe use, storage and disposal of the patch, and the importance of not heating the skin under the patch.

### Resources and references


