

If more information is required please seek help from specialist palliative care



North Yorkshire and York

Selby & York Palliative Care Team & Pharmacy Group May2010 version 2, review date May 2012. Approved by York D&T committee Modified from Northern Cancer Network EOLC guideline



NHS Foundation Trust

Opiate dose conversion chart, syringe driver doses, rescue/PRN doses and opiate patches

Use the conversion chart to work out the equivalent doses of different opiate drugs by different routes.
The formula to work out the dose is under each drug name. Examples are given as a guide.

| Oral opiate mg /24 hr (Divide 24hr dose by six for 4 hourly oral dose) | | Subcutaneous infusion of opiate Syringe driver (SD) dose in mg per 24 hours | | | | Subcutaneous prn opiate Dose in mg every 4 hours injected as required NB Alfentanil in lower doses in micrograms | | | | Opiate by patch Dose microgram/hr | |
|---|--|--|---|--|--|--|--------------------|-------------------|---------------------------|--|--|
| Morphine 24 hour | Oxycodone 24 hour | Diamorphine (DM) 24 hour | Morphine 24 hour | Oxycodone 24 hour | Alfentanil 24 hour | Diamorphine 4 hour | Morphine 4 hour | OxyNorm 4 hour | Alfentanil 2 to 4 hour | Fentanyl <small>change every 72 hrs</small> | Buprenorphine <small>B=Butrans change 7 days T = Transtec change 96 hrs (4days)</small> |
| | Calculated by dividing 24hr oral morphine dose by 2 | Calculated by dividing oral morphine dose by 3 | Calculated by dividing oral morphine dose by 2 | Calculated by dividing oral oxycodone dose by 2 | Calculated by dividing diamorphine s/c dose by 10 | PRN dose is one sixth (1/6 th) of 24 hour subcutaneous (s/c) infusion / syringe driver dose NB Alfentanil injection is short acting. Maximum 6 PRN doses in 24 hours. If require more seek help | | | | | |
| 20 | 10 | 5 | 10 | 5 | 500mcg | 1 | 2 | 1 | 100mcg | (6) | B 10 |
| 45 | 20 | 15 | 20 | 10 | 1500mcg | 2 | 3 | 2 | 250mcg | 12 | B 20 |
| 90 | 45 | 30 | 45 | 20 | 3mg | 5 | 7 | 3 | 500mcg | 25 | T 35 |
| 140 | 70 | 45 | 70 | 35 | 4500mcg | 8 | 10 | 5 | 750mcg | 37 | T 52.5 |
| 180 | 90 | 60 | 90 | 45 | 6mg | 10 | 15 | 8 | 1mg | 50 | T 70 |
| 230 | 115 | 75 | 115 | 60 | 7500mcg | 10 | 20 | 10 | 1.2mg | 62 | T 70 + 35 |
| 270 | 140 | 90 | 140 | 70 | 9mg | 15 | 25 | 10 | 1.5mg | 75 | T70 + 52.5 |
| 360 | 180 | 120 | 180 | 90 | 12mg | 20 | 30 | 15 | 2mg | 100 | T 140 |
| 450 | 225 | 150 | 225 | 110 | 15mg | 25 | 35 | 20 | 2.5mg | 125 | - |
| 540 | 270 | 180 | 270 | 135 | 18mg | 30 | 45 | 20 | 3mg | 150 | - |
| 630 | 315 | 210 | 315 | 160 | 21mg | 35 | 50 | 25 | 3.5mg | 175 | - |
| 720 | 360 | 240 | 360 | 180 | 24mg | 40 | 60 | 30 | 4mg | 200 | - |

Equivalent doses if converting from oral to sc opiate

Breakthrough/ rescue/PRN dose calculation:
Oral

- Morphine or Oxycodone: 1/6th of 24 hour oral dose

Subcutaneous

- Morphine, Diamorphine & Oxycodone: 1/6th of 24hr s/c syringe driver (SD) dose
- Alfentanil: 1/6th of 24hr s/c SD dose
 - Short action of up to 2 hours
 - Seek help if reach Maximum of 6 PRN doses in 24 hours
- Fentanyl patch: 1/5th mcg/hr patch dose = Diamorphine (dose/mg) s/c

(For ease of administration opiate doses over 10mg prescribe to nearest 5mg)

Renal failure/impairment:
Morphine/Diamorphine metabolites may accumulate & usually best avoided

Consider

- Fentanyl patch** if pain is stable.
- Oxycodone** orally or by infusion if mild renal impairment
- Alfentanil** by s/c infusion if **GFR < 30**
If patient is dying & on a Fentanyl patch top up with appropriate s/c Alfentanil dose & if necessary, add into syringe driver as per renal pathway

If unsure please seek help

Fentanyl patches in the dying/moribund patient

- Continue Fentanyl patches every 72 hours in these patients.
 - Remember to change the patch(es) as occasionally this is forgotten!
 - Fentanyl patches are more potent than you may think

If pain occurs whilst patch in situ

- Give 4 hourly PRN doses of subcutaneous(s/c) Diamorphine or Morphine
- Use an alternative s/c opiate e.g. **Alfentanil** or **OxyNorm** in patients with **poor renal function**, Morphine intolerance or where Morphine is contraindicated
- Consult pink table when prescribing 4 hourly PRN subcutaneous opiates**
 - Community care settings generally use **Diamorphine s/c**
 - York Hospital & some other care settings use **Morphine s/c**

Adding a syringe driver (SD) to a Fentanyl patch

If 2 or more rescue/ PRN doses are needed in 24 hours, start a syringe driver with appropriate opiate and continue patch(es). The opiate dose in the SD should equal the total prn doses given in the previous 24 hours up to a maximum of 50% of the existing regular opiate dose. Providing the pain is opiate sensitive continue to give PRN s/c opiate dose & review SD dose daily.
E.g. Patient on 50mcg/hr Fentanyl patch, unable to take PRN oral opiate & on LCP. Keep patch on. Use appropriate opiate for situation or care setting. If 2 extra doses of 10 mg s/c Diamorphine are required over the previous 24 hours, the initial syringe driver prescription will be Diamorphine 20mg/24 hour. Remember to look at the dose of the patch and the dose in the syringe driver to work out the new opiate breakthrough dose each time a change is made.

Always use the chart above to help calculate the correct doses.