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

Opioid dose conversion chart, syringe driver doses, rescue / prn doses and opioid patches

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

Oral opioid mg /24 hour (Divide 24 hour dose by six for 4 hourly prn oral dose)		Subcutaneous infusion of opioid Syringe driver (SD) dose in mg per 24 hours (or micrograms for alfentanil where stated)				Subcutaneous prn opioid Dose in mg every 4 hours injected as required prn NB Alfentanil in lower doses in micrograms				Opioid by patch Dose microgram/hour	
Morphine 24 hour	**Oxycodone 24 hour**	**Diamorphine sc 24 hour**	**Morphine sc 24 hour**	**Oxycodone sc 24 hour**	**Alfentanil sc 24 hour** (500microgram/mL)	**Diamorphine 4 hour**	**Morphine 4 hour**	**Oxycodone 4 hour**	**Alfentanil 2 to 4 hour** (500microgram/ mL)	**Fentanyl** normally change every 72 hours	**Buprenorphine** **B=Butrans change 7 days T = Transtec change 96 hrs (4 days)**
	Calculated by dividing 24 hour 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 24 hour oral morphine dose by 30	Prn dose is one sixth (1/6th) of 24 hour subcutaneous (sc) syringe driver dose plus opioid patches if in situ. *NB* ***Alfentanil injection is short acting****. Maximum 6 prn doses in 24 hours. If require more seek help*				Conversions use UK SPC	
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	12	20	10	1.25mg	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 opioid

Calculation of breakthrough/ rescue / prn doses

Oral prn doses:

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

Subcutaneous:

- Morphine & Oxycodone: 1/6th of 24 hour sc syringe driver (SD) dose
- Alfentanil: 1/6th of 24 hour sc SD dose
  - Short action of up to 2 hours
  - Seek help If reach maximum of 6 prn doses in 24 hours

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

Renal failure/impairment GFR<30mL/min: Morphine/Diamorphine metabolites accumulate and should be avoided.

- **Fentanyl patch** if pain is stable.
- **Oxycodone** orally or by infusion if mild renal impairment
- If patient is dying & on a fentanyl or buprenorphine patch top up with appropriate sc **oxycodone** or **alfentanil** dose & if necessary, add into syringe driver as per renal guidance
- **If GFR<15mL/min** and **unable to tolerate oxycodone** use **alfentanil** sc

If unsure please seek help from palliative care

Fentanyl and buprenorphine patches in the dying/moribund patient

- **Continue fentanyl and buprenorphine patches 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

- Prescribe 4 hourly prn doses of subcutaneous (sc) morphine unless contraindicated.
- Use an alternative sc opioid e.g. **alfentanil** or **oxycodone** in patients with
  - **poor renal function**,
  - morphine intolerance
  - where morphine is contraindicated
- **Consult pink table when prescribing 4 hourly prn subcutaneous opioids**

Adding a syringe driver (SD) to a fentanyl or buprenorphine patch

If 2 or more rescue/ prn doses are needed in 24 hours, start a syringe driver with appropriate opioid and continue patch(es). The opioid 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 opioid dose. Providing the pain is opioid sensitive continue to give prn sc opioid dose and review SD dose daily.

E.g. Patient on 50 micrograms/hour fentanyl patch, unable to take prn oral opioid and in last days of life. Keep patch on. ***Use appropriate opioid for situation or care setting.*** *If 2 extra doses of 15 mg sc morphine are required over the previous 24 hours, the initial syringe driver prescription will be morphine 30mg/24 hour.* ***Remember*** *to look at the* ***dose of the patch and the dose in the syringe driver*** *to work out the* ***new*** *opioid breakthrough dose* ***each time a change is made****.*

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

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