

As mentioned previously, some types of pain may not respond well to opioids: often pain that is situated in a numb area may be less responsive to opioids except at doses which are likely to give troublesome adverse effects.

The only way to establish this is to titrate the dose slowly and painstakingly. Often the use of adjunctive medication is of help. (the different types will be looked at in future articles)

Movement-related pain or "incident pain" is particularly difficult to treat, but recently a new innovation, the Fentanyl lollipop has been of some help with this (see below under Fentanyl).

However, another type of incident pain, which is intermittent and unpredictable (being unrelated to exercise or nursing procedures etc.) is extremely problematic.

Often it is necessary to tackle this kind of pain using other types of medication (such as anticonvulsants, which will be covered in a later article).

Breakthrough pain occurs when the medication doses are insufficient to control the pain and it "breaks through". Usually the dose needs to be increased to provide adequate background pain control, but sometimes a short-acting opioid may be used in addition to the long-acting one.

This may be termed a rescue dose, or supplemental or breakthrough dose.

Breakthrough pain may come on suddenly or gradually and may be brief or prolonged. Some episodes are spontaneous and others are associated with an identifiable precipitant, such as

stress or a change in the weather.

Whenever possible, the rescue dose should be the same opioid and route as the around-the-clock(ATC) drug (e.g. use oral immediate-release morphine as rescue for controlled-release morphine).

The formula for calculating the rescue dose range is one tenth to one sixth (10%-15%) of the total DAILY dose. For example, if taking 30 mg of MS Contin (oral morphine) twice daily, the calculation is : $30\text{mg} \times 2 = 60 \text{ mg/day}$. $60 \times 10 (1/10) = 6\text{mg}$. $60\text{mg} \times 6 (1/6) = 10\text{mg}$.

The rescue range is approximately 6 to 10 mg of immediate release morphine every 1 to 2 hours PRN (as required)for breakthrough pain.

Oral morphine is the standard clinical opioid, but when this fails to work, the clinician is faced with a choice: change the route of administration or change the drug. The latter (opioid rotation or opioid switching) was mentioned above.

Kalso and Vainio conducted a small study ([\[ii\]](#) .) and found that pain relief using morphine and oxycodone was equal but that morphine caused more nausea than oxycodone and also hallucinations were only caused by morphine.

However, many clinicians are skeptical about opioid rotation. Authors such as McQuay suggest that changing the route of administration is preferable if it is possible.

However, this may involve careful consideration of the differences in dose required, especially between oral and injected routes.

McQuay([\[iii\]](#)) believes that spinal infusion (epidural or intrathecal) of opiate in conjunction with a local anaesthetic may offer advantages in treating neuropathic and incident pain where oral

medication has failed.

[\[i\]](#) Kalso E, Vainio A, *Clin Pharmacol Ther* 1990;47:639-46 Morphine and oxycodone hydrochloride in the management of cancer pain

[\[ii\]](#) McQuay Lancet 1999;353:2229-32 Opioids in pain management