



Question: How do you convert methadone from an oral dose to an equivalent subcutaneous dose?

April 2019

Summary:

- For patients with palliative care needs, methadone should only be prescribed under the supervision of a specialist palliative care team.
- For reasons including swallowing difficulties, oral intake restrictions or reduced levels of consciousness, rotation of patients on oral methadone to an equivalent subcutaneous dose may be necessary.
- To convert from oral to subcutaneous, usually the oral dose is divided by 2 to give the subcutaneous dose (*if overdosing is a concern this is the safest option*). Occasionally, the same dose can be used subcutaneously as has been used orally (i.e. 1:1 conversion). Please read the information below for further details.

Information:

The oral bioavailability of methadone varies from 36-100%^{1,2} making an exact oral (PO): subcutaneous(SC) equi-analgesic ratio difficult to determine.³

A conversion ratio of 2:1 for PO:SC methadone is widely suggested.^{1,3,4,5,6} A ratio of 2:1 for PO:SC methadone means that the oral dose should be divided by 2 to give the subcutaneous dose.

Palliative Meds Info: Terms and Conditions

The information outlined above is intended for healthcare professionals only. The information outlined above is believed to accurately reflect the medical literature at the time of writing. Healthcare professionals must use their own judgment to determine the accuracy and relevance of the information. See www.olh.ie for full terms and conditions.

Example: If a patient is taking methadone 10mg orally, using a 2:1 conversion ratio, the equivalent subcutaneous dose is $10\text{mg} \div 2 = 5\text{mg}$.

The Syringe Driver textbook advises that when using this conversion ratio there should be provision for prompt dose review.³ This text suggests that using a 2:1 ratio probably represents a cautious approach, and that upward titration may be necessary. *The Palliative Care Formulary* recommends that for some patients, particularly those receiving a small dose of methadone (<80mg/24h), a 1:1 conversion ratio may be more appropriate.⁵ A 1:1 conversion ratio means that no dose change is required for switching from oral to subcutaneous dosing.

The clinical condition of the patient should be taken into consideration when deciding which conversion ratio to use. The patient should be monitored very carefully during the conversion period. The ratios outlined above should only be used by practitioners with experience of their use.

*Of note, the **buccal** administration of methadone oral solution has been proposed in the literature as an alternative to subcutaneous administration in patients unable to take methadone orally, or where methadone solution for injection is unavailable. For further details, please contact the Palliative Meds Info Service.*

References

- 1) Monograph Methadone. American Hospital Formulary Services (AHFS). Accessed online on 25/03/2019. Available from www.medicinescomplete.com.
- 2) Monograph Methadone. Micromedex. Accessed online on 25/03/2019. Available from www.micromedexsolutions.com.
- 3) Dickman A, Schneider J. *The Syringe Driver, continuous subcutaneous infusions in palliative care*. 4th Edition. Oxford. Page 149.
- 4) Monograph Methadone. Martindale: The Complete Drug Reference. Accessed online on 25/03/2019. Available from www.medicinescomplete.com.
- 5) Monograph Methadone. Palliative Care Formulary. Accessed online on 25/03/2019. Available from www.palliativedrugs.com.
- 6) Monograph Methadone. Palliative Care Matters. Accessed online on 25/03/2019. Available from www.pallcare.info.