



IWK Health

## IWK GUIDELINES FOR OPIOID CONVERSION

- This is a guideline and does not replace clinical judgement.
- There is significant variability in individual response to various opioids.
- Only calculate equianalgesic doses when patients have been on prolonged opioids and require ongoing treatment with opioids and/or are at risk of opioid withdrawal
- If patient has been on short term/weaning opioids for acute pain, transition to a standard oral dose.

To calculate the dose of an opioid for a patient switching drugs or route:

1. Calculate total dose of the current opioid used in a 24 hour period. This may include PRN doses.
2. Using the equianalgesic table below as a guide, determine the equivalent 24 hour dose of the new opioid and/or route.
3. Due to wide ranges in individual responses and incomplete cross-tolerance, the calculated dose of the new opioid should be reduced by 25-50% for safety purposes.
4. The new 24 hour total dose is divided into individual doses, based on the new opioid or route.
5. Dose may then be titrated to individual response.
6. When any change in opioid or route is made, frequent assessments are required.

OPIOID EQUIANALGESIC TABLE		
<i>These are equianalgesic doses based on single dose studies in opioid naïve adults.</i>		
OPIOID AGONIST	PARENTERAL (mg)	ORAL (mg)
fentaNYL	0.2	N/A
HYDROmorphone*	1.5	7.5
morphine	10	30

\*The conversion from IV HYDROmorphone to oral HYDROmorphone is not well established. Some prescribers may use a more conservative estimate: 1.5 mg PARENTERAL = 4.5 mg ORAL.

Ex: HYDROmorphone IV infusion 4 micrograms/kg/hour converted to ORAL morphine (weight = 25 kg):

1. Calculate the total per 24 hours:  
HYDROmorphone 4 micrograms/kg/hour x 25 kg x 24 hours = 2400 micrograms ÷ 1000 = 2.4 mg/day
2. Calculate the conversion from IV HYDROmorphone to IV morphine using the equianalgesic table:  

$$\frac{\text{morphine 10 mg IV}}{\text{HYDROmorphone 1.5 mg IV}} = \frac{X}{\text{HYDROmorphone 2.4 mg IV}} \quad X = 16 \text{ mg IV morphine}$$

Calculate the conversion from IV morphine to PO morphine:

$$\frac{\text{morphine 30 mg PO}}{\text{morphine 10 mg IV}} = \frac{X}{\text{morphine 16 mg IV}} \quad X = 48 \text{ mg PO morphine (total daily dose)}$$

3. Reduce this dose by 25-50% to account for incomplete cross tolerance, in switching opioids:  
morphine 24 mg PO (total daily dose)
4. Divide total daily morphine dose by 6 to provide dose to be administered every 4 hours:  
morphine 4 mg PO q4h

Approved by Acute Pain Service/Pharmacy May 2021

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