

Equianalgesic Dose Calculations

The eviQ opioid conversion calculator was designed to support clinicians in managing patients on opioids. The calculator draws from the 'cautious conversions' end of the spectrum. Presented below are some examples of how to utilise the calculator.

Exercise 1: Converting from Oral Morphine to Sustained Release Oral oxycodone

Mrs Jones is a terminally ill lung cancer patient and her current pain medication is oral morphine sulfate sustained release 45 mg every 12 hours. Additionally, Mrs Jones takes 10 mg of immediate release morphine every four hours as breakthrough medication. During a recent assessment Mrs Jones complained of muscle twitching since her morphine dose was increased to 45 mg every 12 hours. Subsequently, her creatinine was found to be elevated. Using the eviQ conversion calculator, convert the current morphine sulphate dose into an equianalgesic dose of sustained release oxycodone.

Step 1 - Current regular opioid therapy

First determine the total 24 dose of current regular opioid. Mrs Jones is receiving morphine sulfate 45 mg every 12 hours, therefore her current 24 hour total dose of oral morphine: $45 \text{ mg} \times 2 = 90 \text{ mg}$.

Complete Step 1 of the calculator using this information then select the



Step 2 – Current breakthrough opioid therapy

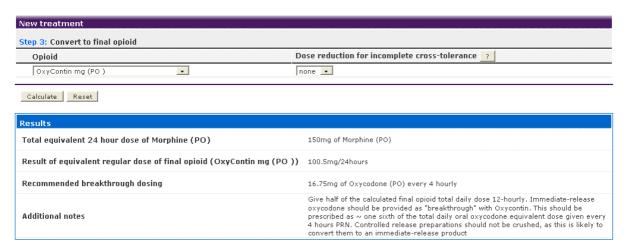
Additionally, Mrs Jones is prescribed 10 mg of immediate release morphine every four hours. She generally takes three doses of breakthrough medication in a 24 hour period. Therefore her 24 hour total breakthrough dose is 10 mg x 3 = 30 mg. (Note: the breakthrough opioid dose entered should be what the patient is actually taking rather than what the patient has been prescribed).

Complete Step 2 of the calculator using this information then select the



Step 3 – Convert to final opioid

Mrs Jones clinician has prescribed sustained release oxycodone as an alternative opioid. Select the desired formulation (OxyContin) from the drop down and select the Calculate button to display the 24 hour equianalgesic dose of OxyContin with suggested breakthrough dosing recommendations.



Exercise 2: Converting from Oral OxyContin to Fentanyl Transdermal Patch

Mr. John Smith, a terminally ill prostrate cancer patient has pain that is well controlled on OxyContin 80 mg, every 12 hours with no breakthrough opioid required. Mr. Smith is now unable to swallow, so the OxyContin needs to be converted into a transdermal fentanyl patch. Using the eviQ conversion calculator, calculate the strength of the fentanyl patch.

Step 1 – Current regular opioid therapy

First determine the total 24 dose of current regular opioid. Mr. Smith is receiving OxyContin 80 mg every 12 hours, therefore his current equivalent 24 hour total dose of oral morphine:80 mg x 2 = 160 mg. Complete Step 1 of the calculator using this information then select the



Step 3 - Convert to final opioid

Select the fentanyl transdermal patch from the drop down and select the Calculate button.



As there is no direct conversion between fentanyl and morphine doses, use the 24 hour dose of oral morphine that is displayed in the results box and refer to the table to determine the equianalgesic fentanyl patch dose. Mr Smith is to be prescribed a 75 mcg/hour fentanyl patch with the suggested breakthrough medication of morphine 40 mg every 4 hours.



As there is no direct conversion between Fentanyl and Morphine doses, consult the table below and use clinical judgement.

ALWAYS prescribe breakthough doses of oral morphine (or any other immediate release opioid) for all patients on transdermal fentanyl to meet any change in analgesic requirement.

Recommended Fentanyl Dose Based on Daily Morphine (PO) Dose (from Durogesic® product information)				
	Fentanyl patch doses (micrograms/hour)			
< 60	12*			
60 - 134	25			
135 - 224	50			
225 - 314	75			
315 - 404	100			
405 - 494	125			
495 - 584	150			
585 - 674	175			
675 - 764	200			

* Based on dose proportionality and not clinical trial data on dose conversion