



Appendix A: Equianalgesic Conversion for Morphine

| Morphine Equivalence Table (for chronic dosing) | | | |
|----------------------------------------------------|------------------------------------------------------------|-----------------|----------------------------------------------|
| DRUG | SC/IV (mg) | PO (mg) | COMMENTS |
| morphine | 10 | 30 ^A | |
| codeine | 120 (SC only) | 200 | metabolized to morphine |
| fentanyl patch | see table below – useful when PO / PR routes not an option | | |
| fentanyl | 0.1 (100 mcg) | NA | usually dosed prn less than 1 hour effect |
| hydromorphone | 2 | 4 | |
| oxycodone | not available in Canada | 20 | |
| sufentanil | 0.01 – 0.04 (10 – 40 mcg) | NA | usually dosed prn less than 1 hour effect |

^A Health Canada recommends using a conversion of 10 mg SC/IV morphine = 30 mg PO (1:3) Refer to <http://www.healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2010/14603a-eng.php>

Fentanyl Transdermal Patch Equianalgesic Conversion^{A, B, C, D}

| Morphine PO (mg/day) | Hydromorphone PO (mg/day) | Oxycodone PO (mg/day) | Fentanyl Patch (mcg/hr) |
|----------------------|---------------------------|-----------------------|-------------------------|
| 45 – 59 | 6 – 11 | 30 – 44 | 12 ^E |
| 60 – 134 | 12 – 26 | 45 – 89 | 25 |
| 135 – 179 | 27 – 35 | 90 – 119 | 37 |
| 180 – 224 | 36 – 44 | 120 – 149 | 50 |
| 225 – 269 | 45 – 53 | 150 – 179 | 62 |
| 270 – 314 | 54 – 62 | 180 – 209 | 75 |
| 315 – 359 | 63 – 71 | 210 – 239 | 87 |
| 360 – 404 | 72 – 80 | 240 – 269 | 100 |
| 405 – 449 | 81 – 89 | 270 – 299 | 112 |
| 450 – 494 | 90 – 98 | 300 – 329 | 125 |
| 495 – 539 | 99 – 107 | 330 – 359 | 137 |
| 540 – 584 | 108 – 116 | 360 – 389 | 150 |
| 585 – 629 | 117 – 125 | 390 – 419 | 162 |
| 630 – 674 | 126 – 134 | 420 – 449 | 175 |
| 675 – 719 | 135 – 143 | 450 – 479 | 187 |
| 720 – 764 | 144 – 152 | 480 – 509 | 200 |
| 765 – 809 | 153 – 161 | 510 – 539 | 212 |
| 810 – 854 | 162 – 170 | 540 – 569 | 225 |
| 855 – 899 | 171 – 179 | 570 – 599 | 237 |
| 900 – 944 | 180 – 188 | 600 – 629 | 250 |
| 945 – 989 | 189 – 197 | 630 – 659 | 262 |
| 990 – 1034 | 198 – 206 | 660 – 689 | 275 |
| 1035 – 1079 | 207 – 215 | 690 – 719 | 287 |
| 1080 – 1124 | 216 – 224 | 720 – 749 | 300 |

^A Adapted from Fraser health Hospice Palliative Care Program Principles of Opioid Management, Appendix A – Fentanyl Transdermal. September 10, 2015 [cited April 6, 2016]. Available from: http://www.fraserhealth.ca/media/HPC_SymptomGuidelines_Opioid.pdf

^B Initiation of fentanyl in patients who are opioid-naïve is contraindicated at any dose.

^C The conversion table is unidirectional only and should **ONLY** be used to convert adult patients from their current oral or parenteral opioid analgesic to the approximate fentanyl transdermal patch for use in chronic pain.

^D Do not convert patients previously on codeine or tramadol to fentanyl transdermal patch due to significant inter-patient variability in metabolism, safety, and effectiveness of these drugs.

^E Health Canada recommends that 12 mcg/hr patches be used for dose titration or adjustments, not as the initiating dose.

| Approximate Breakthrough Doses Recommended for Fentanyl Transdermal Patch^A | | | |
|----------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------|--------------------------------------------------|
| Breakthrough should be 10% of the total daily opioid dose | | | |
| Patch Strength mcg/hour | Oral Morphine Immediate Release (mg) | Oral Hydromorphone Immediate Release (mg) | Oral Oxycodone Immediate Release (mg) |
| 12 | 5 | 1 | 2.5 |
| 25 | 10 | 2 | 5 |
| 37 | 15 | 3 | 10 |
| 50 | 20 | 4 | 12.5 |
| 62 | 25 | 5 | 15 |
| 75 | 25 | 5 | 17.5 |
| 87 | 30 | 6 | 20 |
| 100 | 35 | 7 | 25 |
| 112 | 40 | 8 | 27.5 |
| 125 | 45 | 9 | 30 |
| 137 | 50 | 10 | 32.5 |
| 150 | 55 | 11 | 35 |
| 162 | 60 | 12 | 40 |
| 175 | 65 | 13 | 42.5 |
| 187 | 70 | 14 | 45 |
| 200 | 70 | 14 | 47.5 |
| 212 | 75 | 15 | 50 |
| 225 | 80 | 16 | 55 |
| 237 | 85 | 17 | 57.5 |
| 250 | 90 | 18 | 60 |
| 262 | 95 | 19 | 62.5 |
| 275 | 100 | 20 | 65 |
| 287 | 105 | 21 | 70 |
| 300 | 110 | 22 | 72.5 |

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