GENERIC fentanyl (FEN ta nil)

BRAND Duragesic, Subsys

CLASSIFICATION Opiate Agonist | Anesthetic | Narcotic | Pain Mgt

FORM & STRENGTH

TD PATCH: 12.5 mcg/h, 25 mcg/h, 50 mcg/h, 75 mcg/h, 100 mcg/h | **SOL:** 100 mcg, 200 mcg, 400 mcg, 600 mcg, 800 mcg, 1200 mcg, 1600 mcg | **LOZ:** 200 mcg, 400 mcg, 600 mcg, 800 mcg, 1200 mcg, 1600 mcg | **TAB:** 100 mcg, 200 mcg, 400 mcg, 600 mcg, 800 mcg | **NAS SOL:** 100 mcg/spray, 300 mcg/spray, 400 mcg/spray | **INJ:** 50 mcg/mL | **SL TAB:** 100 mcg, 200 mcg, 300 mcg, 400 mcg, 600 mcg, 800 mcg.

INDICATIONS & DOSING | ADULTS

** Low dose in >65 years of age **

1). ANALGESIA (PRE-OP)
- Dose @ 50-100 mcg IV/IM x1 dose
- Initate 30-60 min before surgery

2). ANESTHESIA (ADJUNCT)
- Dose @ 2-50 mcg /kg/dose IV x1 dose
- LOW DOSE @ 2 mcg/kg/dose
- MOD DOSE @ 2-20 mcg/kg/dose
- HIGH DOSE @ 20-50 mcg/kg/dose

3). ANESTHESIA (REGIONAL, ADJUNCT)
- Dose @ 50-100 mcg IV/IM x1 dose

4). ANESTHESIA (GENERAL)
- Dose @ 50-100 mcg/kg/dose IV x 1 dose
- HIGH-RISK pts use w/ oxygen and muscle relaxant
- Up to 150 mcg/kg/dose may be req'd

5). PAIN (POST-OP)

IV/IM route
- Dose @ 50-100 mcg IV/IM q1-2h prn
- OR @ 0.5-1.5 mcg/kg/h IV prn
- lowest effective dose

* OFF LABEL | PCA route
- Dose @ 10-20 mcg IV q6-20 min prn
- Initate 10-50 mcg IV x1 dose
- Opioid-Exp basal rate up to 50 mcg/h
- Lowest effective dose, shortest effective duration

*** OFF LABEL | MODERATE-SEVERE ACUTE PAIN**
- Dose @ 1-2 mcg/kg/dose
- Use injectable w/ atomization device
- Divide dose and give as 1 spray in each nostril
- Use lowest efective dose, shortest effective duration
- Titrate slowly in pts >65 years of age

INDICATIONS & DOSING | PEDIATRICS

1). SEDATION & ANALGESIA

1-3 years of age
- 2-3 mcg/kg/dose IV q1-4h prn
- OR 1-2 mcg/kg/dose IV x1 dose then 0.5-1 mcg/kg/h

3-12 years of age
- 1-2 mcg/kg/dose IV q1-4h prn
- OR 1-2 mcg/kg/dose IV x1 dose then 0.5-1 mcg/kg/h

>12 years of age
- 0.5-1 mcg/kg/dose IV q1-4h prn
- OR 1-2 mcg/kg/dose IV x1 dose then 0.5-1 mcg/kg/h

2). SEDATION DURING ECMO
- Dose @ 5-10 mcg/kgm/dose IV x1 dose

! ADDITIONAL NOTES
- When treating pain use the lowest effective dose for the shortest effective duration

*** OFF LABEL | POST-OP PAIN**
- PCA route

<50 kg
- 0.5-1 mcg/kg/dose IV q6-20min prn
- Initate @ 0.5-1.5 mcg/kg/dose IV x1 dose
- Max 4 mcg/kg/h
- Opioid-Exp basal rate up to 0.5 mcg/h

>50 kg
- 10-20 mcg IV q6-20 min prn
- Initiate @ 10-50 mcg/dose IV x1 dose
- Opioid-Exp basal rate up to 50 mcg/h

*** OFF LABEL | MODERATE-SEVERE PAIN**
- Use injectable form w/ mucosal atomization device.

1-16 years of age
- 1-2 mcg/kg/dose nasally q1h prn
- Max 50 mcg/dose up to 3 mcg/kg/d

>16 years of age
- 1-2 mcg/kg/dose nasally q1h prn
- Max 10 mcg/dose

MOA & PHARMACOKINETICS

MECHANISM OF ACTION:
Opioid agonist that produces analgesia and sedation by binding to the mu- or k-receptor. The perception and emotional response to pain is altered in the spinal cord and CNS.

ABSORPTION:
Wall absorbed w/ bioavailability based on dosage form. LOZ ~50% bioavailable. TAB ~65% bioavailable. SPRAY ~ 76%. Time to peak also varies by dosage form and loccurs as quickly as 15-21 min (SPRAY) to 0.7-1.5 hours (PO). TD PATCHES peak w/in 20-72 hours with the steady state reached by the end of 72 hours and reapplication of next patch.

DISTRIBUTION:
Highly lipophilic and distributes from the blood into the brain, heart, lungs,and other major organs. Slow distribution into skeletal muscle and fat tissue and then back into systemic circulation. Crosses placenta and distributed into breast milk. 80-85% is protein bound. Can alter blood pH.

METABOLISM:
Hepatically metabolized via the 3A4 pathway as a 3A4 substrate.

ELIMINATION:
75% excreted in the urine w/ 9% in the feces. T1/2 is ~3.7 hours (PO) to 27 hours (TD or SPRAY)

SPECIAL POPULATIONS & CONSIDERATIONS

In renally impaired pts, dose dec of 25% in pts treating pain w/ CrCl 10-50. Dec dose by 50% if CrCl <10. If dialysis pt dec dose by 50%. Caution in hepatically impaired pts. Contraindicated if hypersensitivity or MAOI use w/in 14 days. Caution in elderly, pulmonary impairment, head injury, alcohol use, CNS depression, or GI obstruction. Weigh risk/benefit during pregnancy. Risk of s/sx of opioid w/d or resp depression. No clear human data on breastfeeding. Possible risk of CNS depression in high risk infants.

SIDE EFFECTS | COMMON

Impaired coordination, somnolence, n/v, muscle rigidity, bradycardia, confusion, constipation, xerostomia, diaphoresis, hypotension, pruritus, dyspnea, hallucinations, euphoria, nervousness, urinary retention, dizziness.

SIDE EFFECTS | SERIOUS

Respiratory depression/arrest, apnea, severe bradycardia, severe hypotension, abuse, dependency, adrenal sufficiency, paralytic ileus, seizures, delirium, severe muscle rigidity, cardiac arrest, and circulatory collapse.

BLACK BOX WARNING

ADDICTION/ABUSE/MISUSE:
Opioid agonists can lead to overdose and death. Prior to opioid use assess a pts' abuse/addiction/misuse risk prior to prescribing.

RESPIRATORY DEPRESSION:
Can be serious, life-threatening and fatal. Monitor for respiratory depression during the start of treatment and after any dose increases.

CYP450 3A4 INTERACTION:
Use w/ 3A4 inhibitors or d/c'ing the use of a 3A4 inducer may increase or prolong the effects from fentanyl leading to an increased risk of adverse effects.

RISKS FROM BENZODIAZEPINES & CNS DEPRESSANTS USE:
Concomitant use w/ benzodiazepines and other CNS depressants such as alcohol can result in profound sedation, coma, resp. depression, and death.

DRUG INTERACTIONS | CONSIDERATIONS

CYP3A4 substrate
antidiuretic hormone effects
bradycardia
CNS depression
dec GI motility
hyponatremia
urinary retention
hypotensive effects
lowers seizure threshold
opioid agonist
potentiates neuromusclar blockade
prolongs QT interval
serotonergic effects

DRUG INTERACTIONS | DRUGS OF NOTE

CONTRAINDICATED:
naltrexone
mifepristone
safinamide
samidorphan

AVOID:
almotriptan
alprazolam
butalbital
clarithromycin
clopidogrel
ethanol

MONITOR:
zonisamide
vasopressin
ropinirole
levetiracetam
eplerenone
atorvastatin

CAUTION:
atropine
dexamethasone
tolterodine
loperamide
glycopyrrolate
benzdropine

MONITORING PARAMETERS

S/sx of resp depression. S/sx of addiction/abuse/misuse. Cr at baseline. ECG. Vital signs if used for anesthesia. Level of pain relief if used for pain control.

PATIENT COUNSELING

One use for fentanyl is in relieving severe ongoing cancer pain. Also used as part of anesthesia for the prevention of post procedure pain.

Respiratory depression risk is most likely to occur during the initiation of treatment and during dose increases. Monitor for slowed breathing and other s/sx of resp depression.

Patients on high doses of fentanyl should be advised of the benefits of naloxone and its role should overdose occur.

New, unused, or partially used medicatiosn should be kept in a seccure location. Always follow a strict storage, handling and disposal procedure.

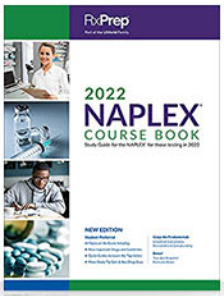
Avoid strenuous exertion such as exercise or other activities that may increase the core temperature of the body. Heat will increase the absorption rate of TD PATCH.

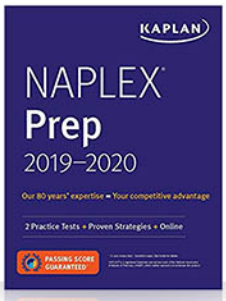
REFERENCES

1). https://online.epocrates.com/drugs/169110/fentanyl/Monograph
2). https://www.drugs.com/monograph/fentanyl.html
3). https://www.webmd.com/drugs/2/drug-6253/fentanyl-transdermal/details

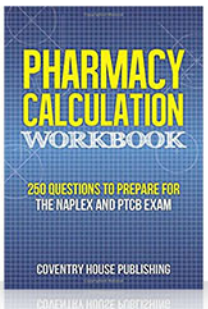
PREPARE FOR SUCCESS!

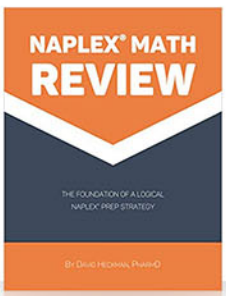
Comprehensive (NAPLEX)

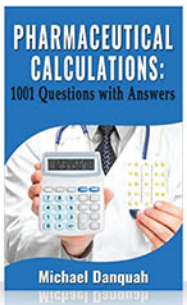


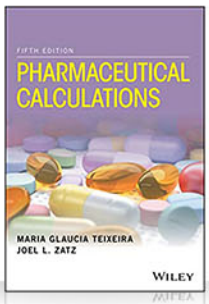


Calculations (NAPLEX)

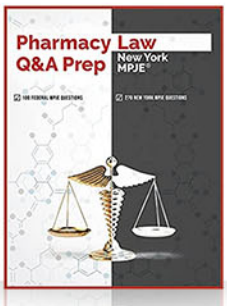


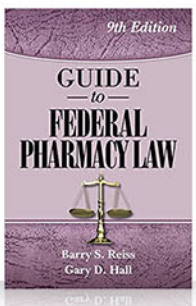






Pharmacy Law (MPJE)





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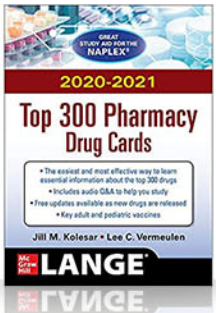

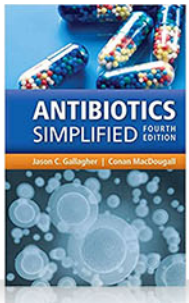

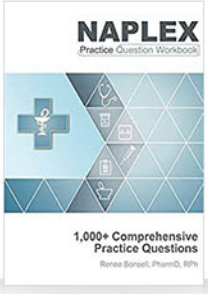

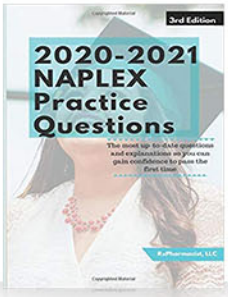

DISCLAIMERS

DRUG CARDS DAILY

Monday at 7 am EST
(6 am CST, 4 am PST)

*HEY **NEW GRAD!***

So you landed that perfect job offer or got the perfect match for your PGY1 and now the ***ONLY*** thing standing in your way is passing the NAPLEX and MPJE.

Here are some NAPLEX & MPJE prep recommendations to help you do everything you can to ***pass the first time!***

*HEY **STUDENT!***

When I was P1 one of the best pieces of advice I got from those before me was to use a NAPLEX Prep book while learning each topic.

This helps focus your learning and the repetition helps to retain info and indirectly prepare you for the NAPLEX

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