

## Initial ED Pain Medication Options in Adults

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### Pain Medication

Acetaminophen	500-1000 mg PO
	1000 mg IV over 15 minutes
	650 mg PR
<b>NSAIDS</b>	
Ibuprofen	400-600 mg PO
Naproxen	250-500 mg PO
Ketorolac	10 mg PO or 10-15 mg IV
Indomethacin	25-50 mg PO
<b>Non-Opioids</b>	
Lidocaine 1%	<b>Local/regional anesthetic</b> Max: 4 mg/kg; 7 mg/kg with epinephrine
	<b>Intra-articular</b> 5-20 mL
Lidocaine 2%	<b>Local/regional anesthetic</b> Max: 4 mg/kg; 7 mg/kg with epinephrine
Lidoderm 5% patch	Apply on skin
Bupivacaine 0.25-0.5%	<b>Local/regional anesthetic</b> Max dose: 2.5 mg/kg; 3 mg/kg with epinephrine
Triamcinolone	<b>Intra-articular</b> 2.5-40 mg
Gabapentin	100-300 mg PO
Pregabalin	25 mg PO
Ketamine - <i>Subdissociative dose</i>	0.3 mg/kg IV in 100 mL NS over 10 min
	<b>Continuous infusion:</b> 0.15 mg/kg/hr IV (100 mg in 100 mL NS)
	1 mg/kg IN (no more than 1 mL per nostril)
<b>Opioids</b>	
Oxycodone (5 mg tablet)	1-2 tabs PO
Hydrocodone (5 mg tablet)	1-2 tabs PO
Oxycodone/acetaminophen (5/325 mg tablet)	1-2 tabs PO
Hydrocodone/acetaminophen (5/325 mg tablet)	1-2 tabs PO
Hydrocodone/ibuprofen (2.5/200 mg tablet)	1-2 tabs PO
Hydromorphone	<b>Weight-based:</b> 0.015 mg/kg IV titrate Q 15 min
	<b>Fixed dose:</b> 1 mg IV titrate Q 10-15 min
	2-4 mg IM
	2-4 mg PO



Morphine	<b>Weight-based:</b> 0.1 mg/kg IV titrate Q 20 min
	<b>Fixed dose:</b> 5 mg IV titrate Q 10-15 min
	<b>Fixed dose infusion:</b> 10 mg IV in 100 mL NS over 10 min titrate Q 20-30 min
	10-20 mg nebulized with 3 mL NS
Fentanyl	<b>Weight-based:</b> 1-1.5 mcg/kg IV in 100 mL NS over 5-10 min
	<b>Fixed dose:</b> 50-100 mcg IV in 100 mL NS over 10 min
	1-2 mcg/kg IN (no more than 1 mL per nostril)
	2-4 mcg/kg nebulized
Naloxone (for opioid-induced pruritus)	0.25-0.5 mcg/kg/hr IV (2 mg naloxone in 100 mL NS)

## Pain Syndromes

<b>Abdominal Pain (non-traumatic)</b>	
Ketorolac	10-15 mg IV
Rescue Opioids	Morphine or Fentanyl IV
<b>Abdominal Pain (traumatic)</b>	
Opioids	Morphine or Fentanyl IV
Acetaminophen	1 g IV over 15 min (adjunct to opioids)
<b>Back Pain (acute)</b>	
NSAID	Ibuprofen or naproxen
Methocarbamol	1500 mg PO
Diazepam	5 mg PO
<b>Back Pain (chronic)</b>	
Gabapentin	100-300 mg PO
Pregabalin	25 mg PO
Lidoderm 5% Patch	No more than 4 patches in 24 hr
<b>Dental Pain</b>	
NSAID	Ibuprofen or naproxen
Dental Blocks	5 mL of Lidocaine (1-2%) –OR– 2 mL of Bupivacaine (0.25-0.5%)
<b>Headache</b>	
<b>Oral</b>	
NSAID	Ibuprofen or naproxen
Butalbital/ acetaminophen/ caffeine (50/325/40 mg)	1-2 tabs PO
Metoclopramide	10 mg PO
<b>Parenteral (in preferred order)</b>	
Metoclopramide	10 mg IV (Slow drip over 10-15 min)
Diphenhydramine	25-50 mg IV
Prochlorperazine	10 mg IV
Chlorpromazine	0.1 mg/kg IV
Sumatriptan	6 mg SQ, repeat with 12 mg SQ (after 1 h)
Dihydroergotamine	0.25 mg IV, repeat with 1 mg (after 1 h)
Valproate	300-1000 mg IV (over 30 min)



Magnesium	2 gm IV (30-60 min)
Droperidol	1-2.5 mg IV
	2.5-8 mg IM
Haloperidol	2.5-5 mg IV
<b>Regional Nerve Blocks</b>	
Paracervical block	5 mL of Lidocaine (1-2%) –OR– 2-3 mL of Bupivacaine (0.25-0.5%)
Occipital nerve block	5 mL of Lidocaine (1-2%) –OR– 2-3 mL of Bupivacaine (0.25-0.5%)
<b>Musculoskeletal Pain (non-traumatic)</b>	
NSAID	Ibuprofen, naproxen, or indomethacin
Local/Regional Blocks	Lidocaine or bupivacaine ± epinephrine
<b>Neuropathic Pain</b>	
Gabapentin	100 mg PO
Pregabalin	25 mg PO
NSAID	Ibuprofen, naproxen, or indomethacin
Lidoderm 5% patch	Apply on skin
<b>Renal Colic</b>	
Ketorolac	10-15 mg IV
Rescue Opioids	Morphine or Fentanyl IV
<b>Sickle Cell Pain Crisis</b>	
<b>Intravenous (IV)</b>	
Opioids	Morphine, fentanyl, or hydromorphone
Ketorolac	10-15 mg IV
<b>Subcutaneous (SQ)</b>	
Morphine	0.1 mg/kg or 5 mg SQ fixed dose with titration Q 10-15 min
Hydromorphone	1-1.5 mg SQ with titration Q 15 min
<b>Intranasal (IN)</b>	
Fentanyl	1-2 mcg/kg IN titrate Q 5-10 min
<b>Nebulized</b>	
Fentanyl	2-4 mcg/kg nebulized single dose
<b>Intramuscular (IM) route is DISCOURAGED!</b>	
<b>Trauma &amp; Burns</b>	
Local/Regional Blocks	Lidocaine or bupivacaine ± epinephrine
Opioids	Morphine or Fentanyl
Ketorolac	10-15 mg IV
Acetaminophen	1 g IV over 15 min (adjunct to opioids/ NSAIDs/ketamine)
Ketamine - Subdissociative dose	0.3 mg/kg IV in 100 mL NS over 10 min
	<b>Continuous infusion:</b> 0.15 mg/kg/hr IV (100 mg in 100 mL NS)
	1 mg/kg IN (no more than 1 mL per nostril)

## Opiate-Tolerant Patient or Refractory/Intractable Pain

Consider subdissociative dosing of ketamine.

