



MANAGEMENT OF Headache (Adult)

This EPPA Clinical Guideline is intended to guide most, but not all, emergency department headaches and should not replace clinical judgment; deviate from or adapt this guideline to meet the individual patient's needs.

Differential Diagnosis:

- Intracranial Hemorrhage (Subarachnoid/Subdural/Intraparenchymal)
- Cavernous sinus thrombosis
- Increased ICP: Mass effect/idiopathic intracranial hypertension (pseudotumor cerebri)
- Infectious: meningitis/encephalitis/intracranial abscess/shingles
- Acute angle-closure glaucoma
- Trauma
- Temporal arteritis
- Carbon monoxide poisoning
- Migraine
- Cluster
- Tension

Workup if indicated

Imaging:

Consider imaging if:

- New abnormal neurologic exam findings
- New sudden-onset severe headache (consider LP if negative CT)
- HIV positive patients with a new type of headache
- Age over 50 with a new type of headache

Medication Contraindications:

- DHE: pregnancy, cerebrovascular disease, uncontrolled HTN, triptan within the last 24 h
- Ketorolac: renal disease, PUD, GI bleeding. Caution in PUD, coagulopathy, concurrent NSAIDs.
- Olanzapine: QTc greater than 500
- Sumatriptan: ischemic heart disease, cerebrovascular syndromes, PVD, ergotamine derivative in the last 24 hours

*This list is not comprehensive. Please consider the contraindications for any medication prior to ordering.

FIRST LINE AGENTS (GENERALLY GIVEN TOGETHER AS A "COCKTAIL")

- Metoclopramide (Reglan) 10 mg IV or Prochlorperazine (Compazine) 10 mg IV
- Diphenhydramine (Benadryl) 25-50 mg IV
- Ketorolac (Toradol) 15 mg IV (substitute DHE or acetaminophen if NSAIDs are contraindicated)
- IV Fluids
- +/- dexamethasone 10 mg IV (may reduce risk of early recurrence)

OPIATES, BARBITURATES, AND BENZODIAZEPINES ARE NOT INDICATED FOR THE TREATMENT OF PRIMARY HEADACHE IN THE EMERGENCY DEPARTMENT.

Persistent Headache or Medication Contraindications?

WE LIKE: (IN NO PARTICULAR ORDER. GENERALLY GIVEN ONE AT A TIME, ASSESSING FOR RESPONSE)

- Olanzapine 2.5-5 mg IV or 5-10 mg IM
- Sodium valproate (Depacon) 500-1000 mg IV load
- Dihydroergotamine (DHE) 1 mg IV (DO NOT use if triptan in the last 24 h)

CONSIDER ALSO:

- Sumatriptan (Imitrex) 6 mg subcutaneous (DO NOT use if DHE in the last 24 h)
- Lidocaine 4% intranasal: 0.5 mL aerosolized to nostril of affected side, or bilateral (lidocaine has mixed success in the literature)
- Magnesium sulfate 1 g IV

Still Symptomatic?

SEVERE/REFRACTORY PAIN

- Propofol 10-20 mg IV every 5-10 min up to 1 mg/kg (time/resource intensive)
- Ketamine 0.3 mg/kg IV over 5-10 min

Pregnant?

FIRST LINE AGENTS (GENERALLY GIVEN TOGETHER AS A "COCKTAIL")

- Metoclopramide (Reglan) 10 mg IV or Prochlorperazine (Compazine) 10 mg IV
- Diphenhydramine (Benadryl) 25-50 mg IV
- Acetaminophen 650-1000 mg PO
- IV Fluids

SECOND LINE AGENTS

- Ketorolac 15 mg IV (Category C, safest in 2nd trimester)
- Magnesium sulfate 1 g IV
- Lidocaine 4% intranasal: 0.5 mL aerosolized to nostril of affected side, or bilateral
- Olanzapine 2.5-5 mg IV or 5-10 mg IM

DO NOT USE

- DHE
- Sodium Valproate





MANAGEMENT OF Headache (Pediatrics)

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Pediatrics:

Mild to moderate severity:

- Acetaminophen 15 mg/kg
- Ibuprofen 10 mg/kg
- Sumatriptan nasal spray 5-20 mg in one nostril (age 5+ Do **NOT** use if DHE in the last 24h)
- Promethazine suppository 0.25-1 mg/kg up to 25 mg PRN nausea **or** Ondansetron 0.15 mg/kg PO PRN nausea

If severe, refractory, or cannot tolerate PO:

- Normal saline 20 ml/kg IV **plus**
- Prochlorperazine 0.15 mg/kg up to 10 mg IV **plus**
- Diphenhydramine up to 1-1.25 mg/kg IV **plus**
- Ketorolac 0.5 mg/kg up to 15 mg IV

Additional Options:

- Sumatriptan 0.06 mg/kg subcutaneous (Do **NOT** use if DHE in the last 24h)
- Metoclopramide 0.2 mg/kg up to 10 mg IV
- Valproate sodium (Depacon) 20-40 mg/kg IV up to 500-1000 mg
- DHE (pretreat with antiemetic such as metoclopramide or prochlorperazine 20 min prior. Do **NOT** use if triptan in the last 24 h)
 - Weight < 25 kg or Age ≤ 9 years: 0.5 mg IV over 3 minutes
 - Age ≥ 10 years: 1 mg IV over 3 minutes

Pediatric medication dosages should never exceed usual adult dosages.

Pediatrics Medication Safety:

	Adverse Reactions	Absolute Contraindications
DHE	Nausea, anxiety, dyskinesia (infrequent)	Pregnancy
Metoclopramide	Dystonia	
Prochlorperazine	Extrapyramidal reaction (rare)	
Promethazine	Extrapyramidal (rare)	Age less than 2
Ketorolac		Renal disease, recent GI bleeding or perforation, suspected ICH

*This list comprises highlights but is not intended to be comprehensive. Please consider the contraindications for any medication prior to ordering.