

Acute Therapy for Adolescents with Migraine

Acute medications, sometimes known as “rescue medications,” should be used to reduce the duration and severity of the migraine attack and prevent progression of symptoms. These medications should be taken at the first indication of migraine, ideally within 30 minutes of onset. In addition to taking medication, resting or sleeping in a dark, quiet room may be beneficial. Medication is most effective when used in combination with lifestyle modifications and proper patient education.

*Note: Severe migraine (unresponsive to medications listed below and lasting for more than 24 hours) may require intravenous infusion of medications.



Over-the-Counter Analgesics

Medications for initial treatment of migraine (with or without aura) with mild pain and minimal disability.

Medication	Mechanism of Action	Dosing and Frequency	Side Effects	Contraindications & Warnings
Nonsteroidal anti-inflammatory drugs (NSAIDs): <ul style="list-style-type: none"> • Ibuprofen (Motrin) • Naproxen (Aleve) 	Inhibition of the cyclooxygenase enzymes (COX-1 or COX-2) that synthesize prostaglandins	Ibuprofen: 10 mg/kg, max dose 800mg daily limit 2400mg every 6-8 hours as needed Naproxen: 5-10mg/kg, 220mg pill strength daily limit 660mg every 8-12 hours as needed	<ul style="list-style-type: none"> • Indigestion • Stomach pain • Nausea/vomiting • Headache • Dizziness • Drowsiness • Bruising • Ringing in ears 	Do not use if history of renal disease, active GI bleeding or bleeding disorder Do not use more than two days per week to avoid rebound or medication overuse headache
Acetaminophen (Tylenol)	Weak inhibitor of the synthesis of prostaglandins	Acetaminophen: 15 mg/kg, max dose 1 gram daily limit 4 grams every 4-6 hours as needed	<ul style="list-style-type: none"> • Hepatotoxicity • Anaphylaxis • Skin reactions 	Do not use with liver disease or failure Do not use more than two days per week to avoid rebound or medication overuse headache

Triptans

Medications for moderate to severe migraine (with or without aura) refractory to analgesics.

Medication	Mechanism of Action	Dosing and Frequency	Side Effects	Contraindications & Warnings
Rizatriptan (Maxalt) Sumatriptan (Imitrex) Zolmitriptan (Zomig) Almotriptan (Axert) Eletriptan (Relpax) Frovatriptan (Frova) Naratriptan (Amerge) Sumatriptan-naproxen (Treximet)	Serotonin agonists with an affinity for 5-HT _{1B/1D} receptors	Rizatriptan: 6-17yr oral 5mg (<40kg), 10mg (>40kg), daily limit 30mg Sumatriptan: 12-17yr oral 25mg (<40kg), 50-100mg (>40kg), daily limit 200mg nasal 5mg (<40kg), 10-20mg (>40kg), daily limit 40mg Zolmitriptan: 12-17yr oral or nasal 2.5mg (<40 kg), 5mg (>40kg), daily limit 10mg Almotriptan: 12-17yr oral 6.25mg (<40kg), 12.5mg (>40kg), daily limit 25mg Eletriptan: 12-17yr oral 20mg (<40kg), 40-80mg (>40kg), daily limit 80mg Frovatriptan: 12-17yr oral 2.5mg, daily limit 7.5mg Naratriptan: 12-17yr oral 1 or 2.5mg, daily limit 5mg Treximet: 12-17yr oral 10/60, 30/180 or 85/500mg, daily limit 85/500mg	<ul style="list-style-type: none"> • Dizziness • Fatigue • Dry mouth • Nausea/vomiting • Numbness • Tingling • Weakness • Pain/pressure • Flushing 	Do not use if history of ischemic vascular disease, cerebral vascular abnormalities, arrhythmias associated with accessory conduction pathway disorders or pregnancy Triptans should not be used in combination with ergotamines Use with caution in patients with hemiplegic or brainstem aura, theoretical risk of vasospasm For Rizatriptan, if taking propranolol should reduce dose to 5mg To prevent the development of medication overuse headache, do not use more than nine days per month

Gepants

Medications for moderate to severe migraine (with or without aura) refractory to or contraindicated usage of triptans.

Medication	Mechanism of Action	Dosing and Frequency	Side Effects	Contraindications & Warnings
Ubrogepant (Ubrelvy) Rimegepant (Nurtec)	CGRP receptor antagonists	Ubrelvy: 50 or 100 mg dose max dose 200mg/24hr Nurtec: 5 mg single dose max dose 75 mg/24hr	<ul style="list-style-type: none"> • Nausea • Drowsiness • Dry mouth 	Do not use with strong CYP3A4 inhibitors (e.g., ketoconazole, itraconazole, clarithromycin)

Antiemetics

Medications for nausea and/or vomiting with migraine (with or without aura) to be used in combination with analgesics/aura refractory to analgesics.

Medication	Mechanism of Action	Dosing and Frequency	Side Effects	Contraindications & Warnings
Ondansetron (Zofran)	5-HT ₃ receptor antagonist	Ondansetron: 4 or 8 mg per dose max dose 24mg/24hr every 8-12 hours as needed	<ul style="list-style-type: none"> • Dizziness • Drowsiness • Headache 	Avoid if taking other QT interval prolonging agents
Promethazine (Phenergan)	Dopamine receptor and H ₁ receptor antagonist	Promethazine: 0.25-0.5 mg/kg/dose max dose 100mg/24hr every 4-6 hours as needed	<ul style="list-style-type: none"> • Paradoxical effects-excitability restlessness 	Avoid if taking other QT interval prolonging agents or if known hypersensitivity to promethazine

Anti-histamines

Medications to induce sleep with migraine (with or without aura) to be used in combination with analgesics.

Medication	Mechanism of Action	Dosing and Frequency	Side Effects	Contraindications & Warnings
Diphenhydramine (Benadryl)	Histamine H ₁ Antagonist	Diphenhydramine: 6.25 or 12.5 mg per dose max 6 doses/24hr every 4 hours as needed	<ul style="list-style-type: none"> • Drowsiness • Dizziness • Tremor • Headache • Stomach upset 	Avoid use in patients with overactive thyroid, increased eye pressure or previous hypersensitivity reaction

References/Resources

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