

Therapeutic Management of an Acute Migraine Attack in Pediatrics (6-17 years)

International Classification of Headache Disorders diagnostic criteria for migraine

- Must have had at least 5 headaches
- The headache must last 2-72 hours long

The headache must have **TWO** out of the 4 criteria:

- Pain that is unilateral or bilateral (typically frontotemporal)
- Pulsating quality
- Moderate or severe pain
- Worsened by, or causes avoidance of routine physical activity

The headache must have ONE of the following:

- Nausea **AND/OR** vomiting
- Light AND noise sensitivity

Rules of treatment

1. Treat early, as soon as the attack starts.
2. Repeat 1 dose prn within 24h if attack persists after 1st dose in appropriate interval.
3. Maximum doses: 2 days/week for triptans; 3 days/week for NSAIDs.
4. For patients with a lot of emesis/early emesis, consider nasal spray or ODT format.
5. Medications from different classes may be used in combination

Recommendations

Non-specific treatment of migraine attacks

| TREATMENT | DOSAGE | INTERVAL | MAXIMUM |
|---------------|----------------|------------|---|
| Acetaminophen | 15 mg/kg/dose | q4-6h prn | 1000 mg/dose, 75 mg/kg/day or 4000 mg/day |
| Ibuprofen | 10 mg/kg/dose | q6-8h prn | 600 mg/dose, 40 mg/kg/day or 2400 mg/day |
| Naproxen | 5-7 mg/kg/dose | q8-12h prn | 500 mg/dose, 10 mg/kg/day or 1000 mg/day |

Specific treatment of migraine attacks for patients

| TREATMENT | DOSAGE | INTERVAL | MAXIMUM | |
|---|--|--|----------------------------------|---|
| Almotriptan | < 40 kg: 6.25 mg PO ≥ 40 kg: 12.5 mg PO | Can repeat in 2 hours, max 2 doses/24 hours | 40 kg: 12.5 mg ≥ 40 kg: 25 mg | 6.25 mg and 12.5 mg tablets approved by Health Canada and FDA for ≥ 12 yo |
| Rizatriptan Tablets & ODT | < 40 kg: 5 mg PO ≥ 40 kg: 10 mg PO | Can repeat in 2 hours, max 2 doses/24 hours | 40 kg: 10 mg ≥ 40 kg: 20 mg | 5 mg ODT approved by FDA for ≥ 6 yo |
| Sumatriptan nasal spray | < 40 kg: 5 mg PO ≥ 40 kg: 20 mg PO | Can repeat in 2 hours, max 2 doses/24 hours | 40 kg: 10 mg ≥ 40 kg: 40 mg | 10 mg nasal spray approved by European Medicines Agency for ≥12 yo |
| Sumatriptan/Naproxen combined tablet | < 40 kg: Do not use due to the 500mg naproxen dose which is too high ≥ 40 kg: 85mg Sumatriptan/500 mg Naproxen once per day | | | 85/500 mg tablets approved by FDA for ≥ 12 yo |
| Zolmitriptan Tablets, ODT & nasal spray | < 40 kg: 2.5 mg PO ≥ 40 kg: 5 mg PO | Can repeat in 2 hours, max 2 doses/24 hours | 40 kg: 5 mg ≥ 40 kg: 10 mg | 2.5 mg nasal spray approved by FDA for ≥12 yo |

Anti-nausea medication

| TREATMENT | DOSAGE | INTERVAL | MAXIMUM |
|--|------------------------|-----------|------------|
| Metoclopramide liquid, tablets | 0.1-0.3 mg/kg/dose PO | q6h prn | 10 mg/dose |
| Ondansetron liquid, tablets and ODT | 0.15-0.2 mg/kg/dose PO | q8h prn | 8 mg/dose |
| Prochlorperazine tablets and suppositories | 0.1 mg/kg/dose PO/PR | q6-8h prn | 10 mg/dose |



Over-the-counter preventive treatment

| TREATMENT | DOSAGE | INTERVAL | MAXIMUM |
|---------------------------|----------------|--------------|------------|
| Coenzyme Q10 or ubiquinol | 1-3 mg/kg/day | Daily or BID | 200 mg/day |
| Magnesium (elemental) | 9 mg/kg/day | BID or qHS | 600 mg/day |
| Vitamin B2 (riboflavin) | 200-400 mg/day | Daily or BID | 400 mg/day |

Pharmacological preventive treatment ^{9, 15}

| TREATMENT | DOSAGE | INTERVAL | MAXIMUM |
|---------------|------------------------------|--------------|----------------------------|
| Amitriptyline | 1 mg/kg/day | HS | 75 mg/day |
| Propranolol | 2-4 mg/kg/day | TID | 120 mg/day |
| Topiramate | 2 mg/kg/day | Daily to BID | 200 mg/day |
| Fremanezumab* | ≥ 45 kg: 225 mg subcutaneous | Monthly | Fixed dose based on weight |

*As of January 30, 2026, Health Canada approved for children and adolescents aged 6-17 years with episodic migraine (<15 headache days per month) and weighing ≥ 45 kg

SUGGESTIONS FOR PREVENTIVE TREATMENT

1. Therapeutic trials should be a minimum of 6-8 weeks at the target dose.
2. Titration of pharmacologic preventive interventions to the target dose should start low and go slow, over 4-8 weeks.
3. Screen for contraindications to treatments prior to starting them.
4. Treatment decisions need to be individualized based on the patient's preferences and medical profile.

SELF-MANAGEMENT RECOMMENDATIONS - Non-pharmacological recommendations for daily headache prevention

Exercise

- Moderate to high intensity physical exercise 30-60 minutes a day.

Sleep

- Establish a regular sleep routine (consistent sleep/wake schedule) and ensure adequate amounts of sleep. Avoid screens and other stimulating activities 1 hour prior to sleep.

Food and Diet

- Regular meals and fluid intake throughout the day (goal of 8 cups of water/day) is recommended.
- Avoid skipping meals; include protein rich foods in every meal.
- Limit or reduce the amount of caffeine in the diet to avoid caffeine withdrawal headaches. Caffeine includes iced tea, caffeinated soda, energy drinks, chocolate, coffee, tea.
- A small number of people may have specific food triggers (e.g. tyramine, histamine). Triggers can be identified by keeping a headache diary and eliminated if identified.
- It is NOT recommended to undertake multiple elimination diets.

Mind and Body Connection

- Daily mindfulness (meditation, breathing, biofeedback) and relaxation (yoga, massage, physiotherapy) can help prevent headaches and reduce pain during an attack.
- Activity pacing is a helpful tool to support patients to stay engaged in daily activities and limit activity avoidance.
- Anxiety and depression are common in children and adolescents with migraine. Screening and access to mental health support are recommended if symptoms present.

References available at www.headachesociety.ca

The recommendations and all other information in this leaflet are based on published guidelines and on the expert consensus endorsed by the Pediatric Canadian Headache Network (PeCaHN). The advice is intended solely for insured medical professionals and Migraine Canada expressly disclaims any direct or indirect liability to any patient.