

MIGRAINE DIAGNOSIS & MANAGEMENT IN ADULTS

Migraine, which is historically underdiagnosed, is by far the most common headache type in patients seeking help for headache, affecting 17% of women and 6% of men. History and physical with a focus on the neurologic examination are usually sufficient to make a diagnosis.

- Neuroimaging is not indicated in patients with recurrent headaches with clinical features of migraine, a normal neurologic examination findings, and no **red flags**¹⁻³

Red flags

Signs

- Fever and meningismus
- Papilledema
- Focal neurologic findings
- New headache in pt. > age 50

Symptoms

- Thunderclap onset
- Loss of Consciousness
- Made worse by cough, valsalva or exertion
- Pregnancy or postpartum

Diagnosis

- Temporal arteritis
- Relevant systemic illness
- Acute glaucoma
- HA lasting >72 hours

ICDH-3 Diagnostic criteria (Migraine without aura)⁴

A. At least 5 headache attacks fulfilling the criteria B-D

B. Attacks last 4-72 h

C. With at least 2 of the following 4 characteristics:

1. Unilateral location
2. Pulsating quality
3. Moderate or severe pain intensity
4. Aggravation by or causing avoidance of routine physical activity

D. At least 1 of the following during headache:

1. Nausea and/or vomiting
2. Photophobia and phonophobia

E. Not better accounted for by another ICHD-3 diagnosis

Less than 10% of patients presenting to a PCP with complaint of headache will have a secondary cause (e.g. trauma, vascular, infection, tumor, hyperviscosity, HTN, toxin)

Approximately **1 billion dollars** each year are spent on unnecessary brain imaging of primary headache disorders.³

Diagnosis

Migraine Diagnostic Criteria⁵

Headache attacks lasting 4-72 hours (untreated or unsuccessfully treated)

Headache has at least two of the following four characteristics:

1. unilateral location
2. pulsating quality
3. moderate or severe pain intensity
4. aggravation by or causing avoidance of routine physical activity (e.g. walking or climbing stairs)

During headache at least one of the following:

1. nausea and/or vomiting
2. photophobia and phonophobia

Common Prodromal Symptoms

- Yawning
- Mood changes
- Light sensitivity
- Neck pain

Common Aura symptoms

- Visual disturbances (spot or wavy lines)
- Vertigo
- Sensory changes (numbness or tingling)
- Cutaneous allodynia

Management

Comprehensive migraine therapy includes management of lifestyle factors and triggers, acute and prophylactic medications, and migraine self-management strategies

Pay attention to lifestyle and specific migraine triggers in order to reduce the frequency of attacks.⁴

- irregular or skipped meals
- irregular or too little sleep
- a stressful lifestyle
- excessive caffeine or alcohol consumption
- lack of exercise
- obesity
- exposure to lights, sounds or odors

Look for Exacerbating Medications

- OCP/hormones
- Decongestants
- SSRIs
- PPIs
- Opioids/Butalbital (Medication overuse HA)

Treatment of Acute Migraine

Triptans (see page 4) and DHE nasal spray are first line prescription medications for patients with acute migraines who have failed over-the-counter analgesics (NSAIDS, acetaminophen).¹

Opioids, tramadol and butalbital combination medications **should be avoided** due to their increased risk for abuse and medication overuse headache. The combination of Triptans and NSAIDS may be more efficacious than triptans alone.³

Antiemetics: Chlorpromazine (12.5 mg), metoclopramide (10 mg), and prochlorperazine (10 mg) can be delivered orally, rectally or parenterally to treat the headache as well as associated nausea.

- Can be used in combination with NSAIDs or Triptans.

Pregnancy: Acetaminophen and metoclopramide are considered the safest option if medications are required.⁵

Prophylactic Treatment

Prophylactic medication is indicated in the following circumstances:^{3,6}

- Recurrent migraine attacks are causing considerable disability despite optimal acute drug therapy
 - generally 6 or more/month
- Frequency of acute medication use is approaching levels that place the patient at risk of medication-overuse headache
 - acute medications are used on ≥ 10 d/mo for triptans, ergots, opioids, and combination analgesics
 - acute medications are used on ≥ 15 d/mo for acetaminophen and NSAIDS
- Recurrent attacks with prolonged or complex aura (hemiplegic migraine, basilar-type migraine, etc)
- Contraindications to acute migraine medications are making symptomatic treatment of migraine attacks difficult.

1st line Prophylactic Medication Options include:⁴

Antiepileptics: divalproex sodium, sodium valproate, topiramate

Beta-Blockers: Propranolol, metoprolol, timolol

2nd line agents:

Antidepressants: amitriptyline, venlafaxine

Beta-blockers: atenolol, nadolol

menstrual-associated migraines

1st line: frovatriptan

2nd line: naratriptan & zolmitriptan

New preventive treatments

OnabotulinumtoxinA is (FDA)-approved therapy for the prevention of chronic migraine, defined as headache occurring on more than 15 days per month

Erenumab-aooe (Aimovig) is a CGRP receptor blocker

Triptan Cost

Generic Name	Brand Name	Route	Strength	Quantity	Brand Price	Generic Price
Sumatriptan	Imitrex	oral	25mg	9		
	Imitrex	oral	50mg	9	\$684.87	\$24.88
	Imitrex	oral	100mg	9	\$684.87	\$29.56
	Imitrex	nasal	0.5mg/0.1ml		NA	NA
	Imitrex	nasal	20mg/0.1ml	6	NA	\$369.02
	Imitrex	injection	6mg/0.5ml	2	\$450.52	\$214.71
	Onzetra	nasal	11mg	16	\$825.60	NA
Sumatriptan/Naproxen	Treximet	oral	10mg/60mg	9	\$1,056.11	NA
	Treximet	oral	85mg/500mg	9	\$1,001.01	NA
Almotriptan*	Axert	oral	6.25mg	6	\$307.43	NA
	Axert	oral	12.5mg	6	NA	\$251.52
Eletriptan	Relpax	oral	20mg	6	\$448.40	\$368.76
	Relpax	oral	40mg	6	\$448.40	\$368.76
Frovatriptan	Frova	oral	2.5mg	9	\$873.96	\$650.50
Naratriptan	Amerge	oral	1mg	9	NA	\$265.41
	Amerge	oral	2.5mg	9	\$611.04	\$265.41
Rizatriptan*	Maxalt	oral	5mg	18	\$689.92	\$113.85
	Maxalt	oral	10mg	18	\$679.92	\$119.55
	Maxalt MLT	oral	5mg	18	\$789.90	\$119.71
	Maxalt MLT	oral	10mg	18	\$789.90	\$119.71
Zolmitriptan*	Zomig	oral	2.5mg	6	\$701.70	\$300.77
	Zomig	oral	5mg	3	\$350.84	\$166.25
	Zomig ZMT	oral	2.5mg	6	\$701.70	\$300.77
	Zomig ZMT	oral	5mg	3	\$350.84	\$166.25
	Zomig ZMT	nasal	2.5mg/0.1ml	6	\$482.51	NA
	Zomig ZMT	nasal	5mg/0.1ml	6	\$482.51	NA

* Pediatric indications

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- 1) Marmura, M. J., Silberstein, S. D. and Schwedt, T. J. The Acute Treatment of Migraine in Adults: The American Headache Society Evidence Assessment of Migraine Pharmacotherapies. *Headache: The Journal of Head and Face Pain*, 2015;55: 3–20.
- 2) Brandes JL, Kudrow D, Stark SR, et al. Sumatriptan-naproxen for acute treatment of migraine: A randomized trial. *JAMA*. 2007;297:1443-1454.
- 3) Charles A. Migraine. *NEJM* 377;6: 553-561.
- 4) Rizzoli P, Mullally W. Headache. *Am J Med* 2018;131:17-24.
- 4) Silberstein S, Holland S., Freitag F., Dodick D, et al. Evidence-based guideline update: Pharmacologic treatment for episodic migraine prevention. *Neurology* 2012;78:1337–1345.
- 5) Becker, W. Acute Migraine Treatment in Adults. *Headache* 2015;55:778-793
- 6) Becker W, Findlay T, Moga C, Scott N, Harstall C, Taenzen P. Guideline for primary care management of headache in adults. *Can Fam Physician* 2015;61:670-9