

# Migraine Matters: What Every Primary Care Clinician Should Know

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## Disclosure

Consultant: AbbVie; Amneal; Axsome; Bausch Health;  
Eli Lilly; Ipsen; Pfizer

Research Grant (Paid to Institution): ShiraTronics



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## Learning Objectives

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- Define migraine and review its epidemiology
  - Discuss migraine pathophysiology
  - Distinguish migraine from other headache disorders
  - Review migraine management strategies
  - Identify and dispel common migraine myths
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# What Is Migraine?

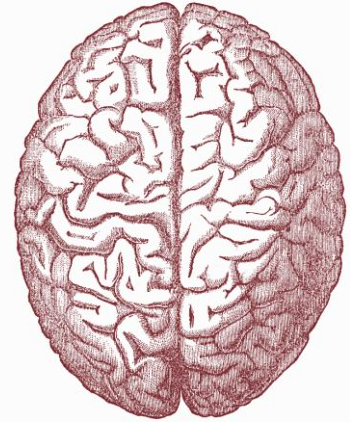
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## Migraine Definition

An **inherited disorder** characterized by attacks including a variety of **neurological** and **gastrointestinal** symptoms with or without severe headache.

Neurological symptoms may include sensory, vestibular, and cognitive disturbances.



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## Migraine Prevalence

>1 billion worldwide



1 in 5 women



1 in 16 men



1 in 11 children



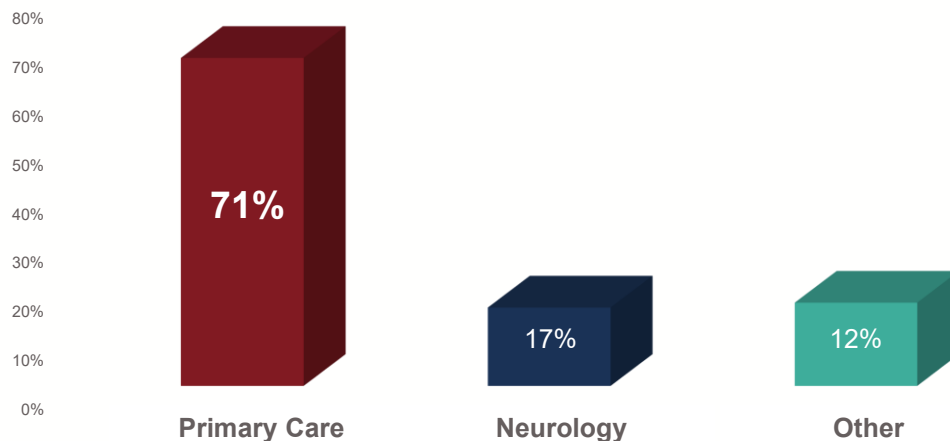
1 in 4 homes



Lancet Neurol. 2024;23(4):344-381. Headache. 2021;61(7):1021-1039; Neurology. 2007;68:343-349; Curr Pain Headache Rep. 2013;17:341.

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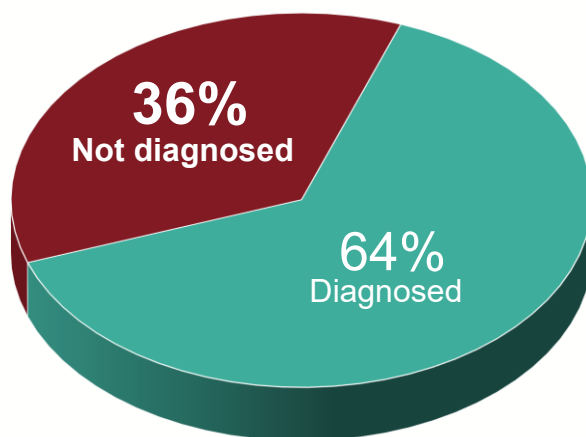
## Who Do Patients Consult for Migraine?



Headache. 2003;43:330-335. Headache. 2022 Feb;62:122-140.

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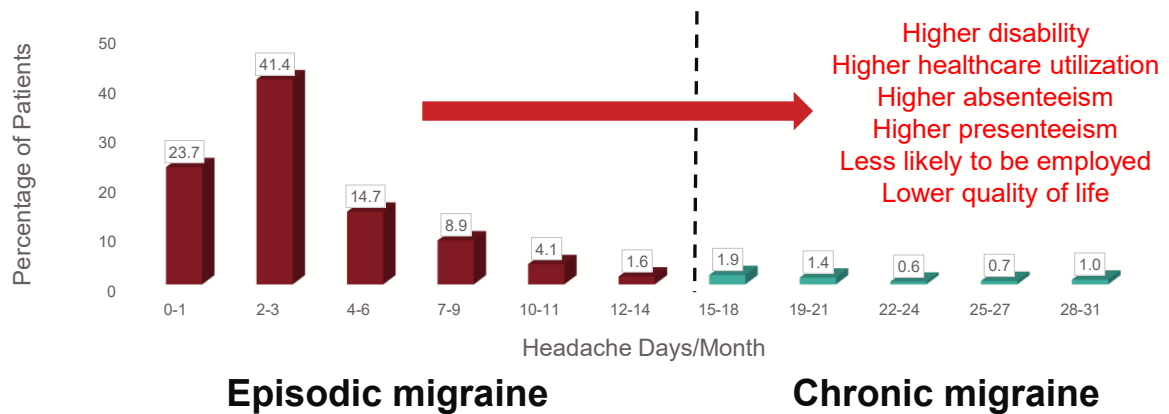
## Migraine Remains Underdiagnosed



US data from the CaMEO-1 prospective, observational, web-based cohort study conducted in 2021  
Cephalgia. 2023 Jun;43(6):3331024231180611.

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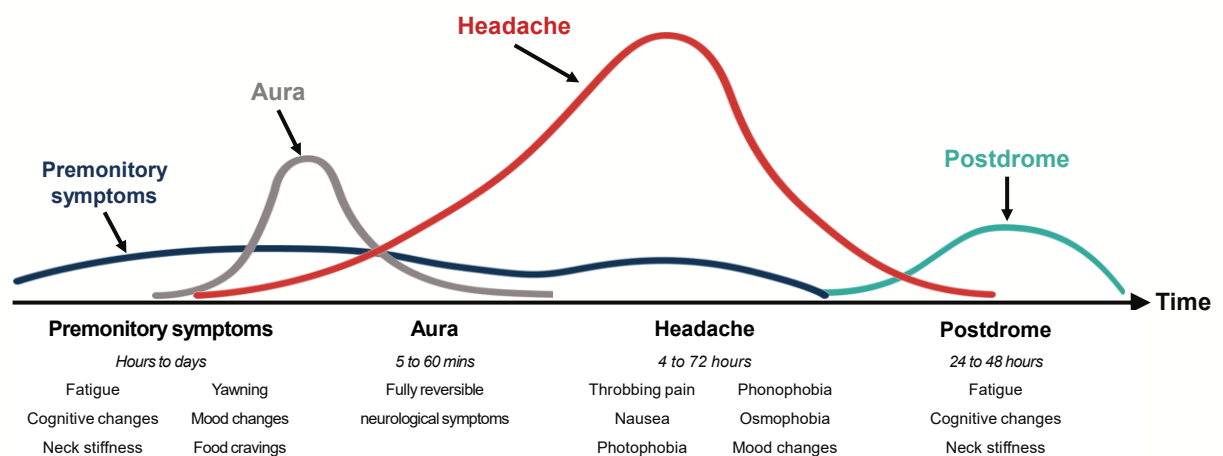
## Frequency of Headache Days Among Patients with Migraine



Cephalalgia. 2011;31:301-315; Headache. 2016;56:306-322. Headache. 2018;58:1579-1592.

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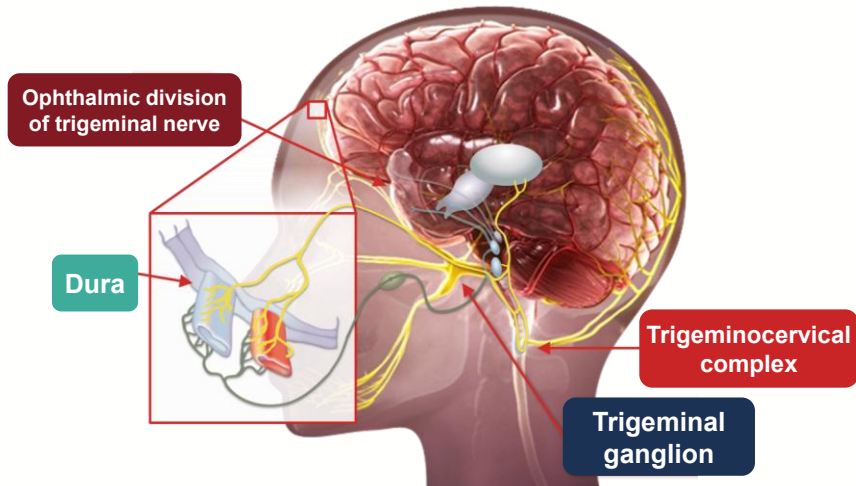
## Phases of a Migraine Attack



Adapted from Drugs. 2018;78:411-437.

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## Pathophysiology of Migraine



Physiol Revs. 2017;97:553-622.

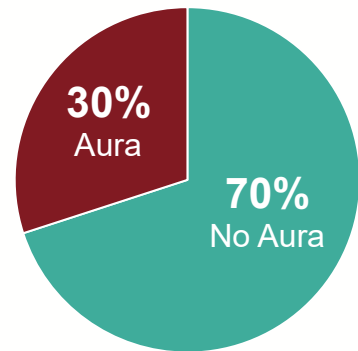
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## How Do I Diagnose Migraine?

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## Migraine Diagnosis

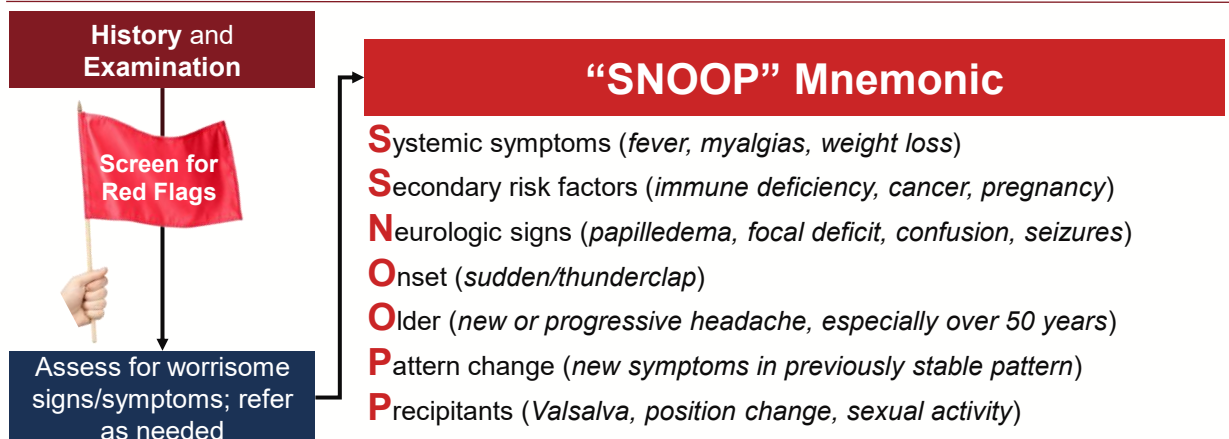
| ICHD-3 Criteria                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| At least <b>5 attacks</b> meeting the following criteria:                                                                                                                                                               |
| Duration of 4-72 hours (2-72 in children)                                                                                                                                                                               |
| <b>≥2 of the following:</b>                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Unilateral location</li> <li>• Pulsating pain</li> <li>• Moderate-severe pain intensity</li> <li>• Aggravation by or causing avoidance of routine physical activity</li> </ul> |
| <b>≥1 of the following:</b>                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• Nausea and/or vomiting</li> <li>• Photophobia <b>AND</b> phonophobia</li> </ul>                                                                                                |
| Not attributable to another disorder                                                                                                                                                                                    |



Cephalalgia. 2018;38:1-211; J Headache Pain. 2018;19:77.

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## Rule Out Secondary Headache: When to Be Concerned



Adapted from Continuum (Minneapolis Minn). 2021;27:572-585.

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## Migraine or Tension-type Headache?

|                                     | Migraine                             | Tension-type Headache                |
|-------------------------------------|--------------------------------------|--------------------------------------|
| Duration                            | 4-72 hours (2-72 in children)        | 30 minutes – 7 days                  |
| Location                            | Unilateral (40% bilateral)           | Bilateral                            |
| Description of pain                 | Pulsating (50% non-pulsating)        | Pressing/Tightening (non-pulsating)  |
| Pain intensity                      | Moderate-severe                      | Mild-moderate                        |
| Effect of routine physical activity | Aggravated by                        | None                                 |
| Nausea or vomiting                  | Yes                                  | No                                   |
| Photophobia or phonophobia          | Both                                 | No more than 1                       |
| Attributable                        | Not attributable to another disorder | Not attributable to another disorder |

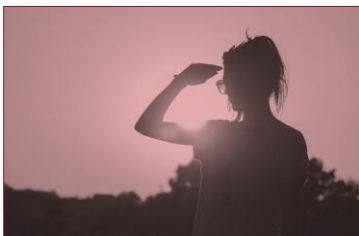
**NOTE:** Tension-type headache rarely presents as a chief complaint.  
If a patient is in your office for complaint of recurring headache, it is likely migraine.

Cephalalgia. 2018;38:1-211.

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## 3-Question Screener: ID Migraine

During the **last 3 months**, did you have the following with your headaches:



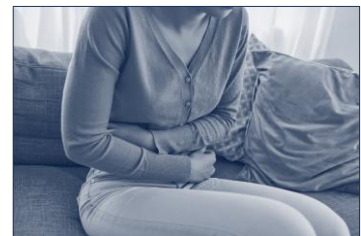
### Photophobia

Light bothered you (a lot more than when you don't have headaches)



### Impairment

Your headaches limited your ability to work, study or do what you needed to do for at least one day



### Nausea

You felt nauseated or sick to your stomach

**"PIN" the migraine diagnosis**  
**"Yes" to 2 or 3 questions = 93% have migraine**

Neurology. 2003;61:375-382.

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# How Do I Manage Migraine?

Acute Treatment

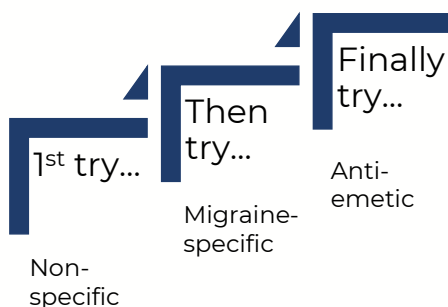
Preventive Treatment

Non-medication Treatments

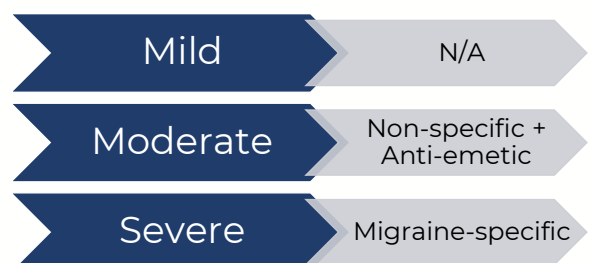
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## Step vs Stratified Care

**STEP**  
within or across attacks



**STRATIFIED**  
by disease severity



JAMA. 2000;284:2599-605.

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## Pearls: Acute Treatment of Migraine

|                                           |                                                                                                             |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Nausea/vomiting                           | Combine with anti-nausea medication, or pursue non-oral route of administration (e.g., nasal, subcutaneous) |
| Triptan side effects                      | Consider -triptan with good side effect profile (e.g., naratriptan, almotriptan), or lower the dose         |
| Triptan not tolerated, or contraindicated | Select a different class (e.g., -gepant, -ditan)                                                            |
| Incomplete relief, or headache recurs     | Increase dose or combine classes (e.g., migraine-specific, NSAID, dopamine antagonist)                      |
| Prefer non-medication treatment           | Consider neuromodulation device                                                                             |
| Medication overuse                        | Start migraine prevention, discuss medication overuse headache                                              |

Headache. 2019;59:1-18. Continuum (Minneap Minn). 2021;27:597-612.

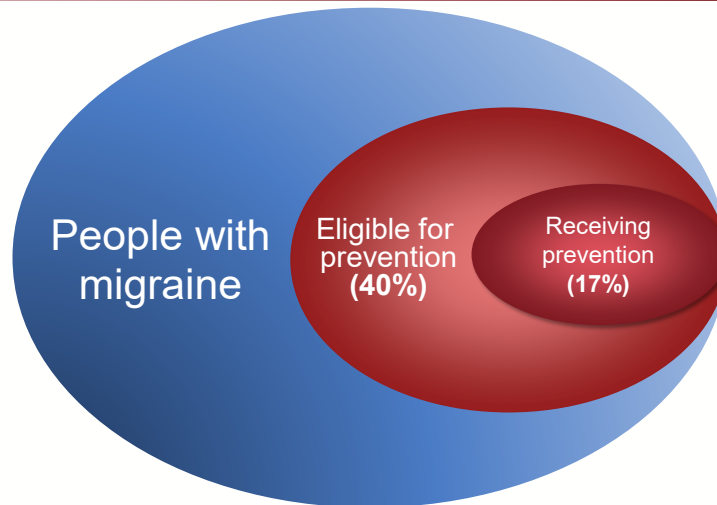
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# How Do I Manage Migraine?

Preventive Treatment

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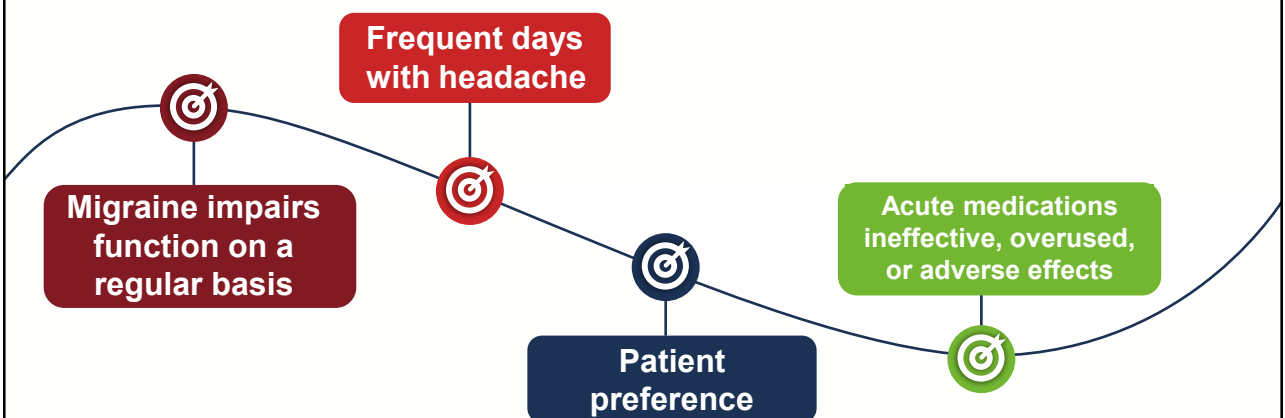
## Who Is Eligible for Preventive Treatment?



Headache. 2022;62:122-140.

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## When to Prescribe Preventive Treatment



Continuum (Minneap Minn). 2021;27:613-632.

**Rule of Thumb: 4+ migraine or moderate-to-severe days/month**

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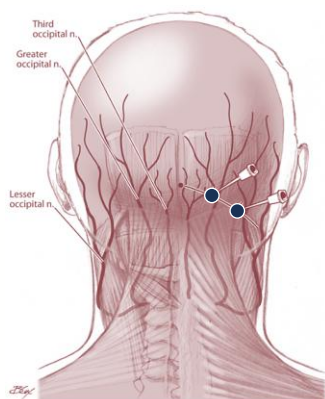
## Pearls: Preventive Treatment of Migraine

|                                            |                                                                                                                              |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Women of child-bearing age                 | <b>AVOID</b> valproate sodium and topiramate (teratogenic)                                                                   |
| Patient comorbidities                      | Consider co-treatment (e.g., topiramate or atogepant with obesity)                                                           |
| Multiple side effects or contraindications | Consider monoclonal antibody, gepant, or onabotulinumtoxinA                                                                  |
| Adherence concerns                         | Educate about adverse effects, consider injectable options (e.g., monoclonal antibody or onabotulinumtoxinA)                 |
| Non-pharmacologic treatment preferred      | Consider nutraceuticals, or neuromodulation device                                                                           |
| Insufficient relief                        | If target dose achieved for an adequate duration (~8 wks), consider changing or adding a second layer of migraine prevention |

Headache. 2019;59:1-18. Continuum (Minneap Minn). 2021;27:613-632.

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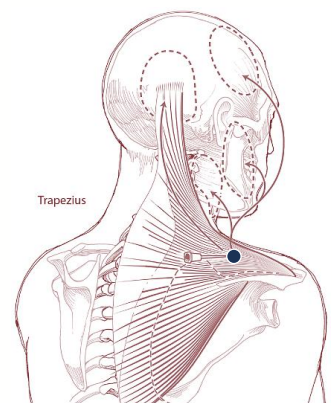
## Common Procedures for Migraine



**Nerve blocks**



**OnabotulinumtoxinA**



**Trigger point injections**

Headache. 2021;102:1-1039. Headache. 2013;437-446. Headache. 2014;1441-1459

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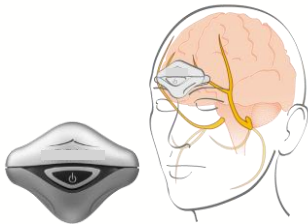
# How Do I Manage Migraine?

Non-pharmacological  
Treatments

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## Neuromodulation Devices Acute and Preventive Treatment

External trigeminal  
nerve stimulation



Transcutaneous electric  
nerve stimulation\*



*\*FDA-cleared for preventive treatment.*

External combined occipital and  
trigeminal neurostimulation†



*†FDA-cleared for acute treatment.*

J Headache Pain. 2020;21:142; Expert Rev Med Devices. 2021;18:333-342; Curr Pain Headache Rep. 2025;29(1):47.

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## Neuromodulation Devices

### Acute and Preventive Treatment (Continued)

#### Remote electrical neuromodulation



*\*FDA-cleared for patients as young as 8 years of age and no added risk in pregnancy.*

J Headache Pain. 2016;17:91; J Headache Pain. 2020;21:142; Curr Pain Headache Rep. 2025;29(1):47.

#### Single-pulse transcranial magnetic stimulation



#### Noninvasive vagus nerve stimulation



*\*FDA-cleared for migraine, cluster headache, paroxysmal hemicrania, hemicrania continua.*

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## Nutraceuticals

| Agent                   | Daily Dose      | Notes                      |
|-------------------------|-----------------|----------------------------|
| Magnesium               | 400 mg – 600 mg | Diarrhea, nausea           |
| Riboflavin (vitamin B2) | 400 mg          | Yellow urine discoloration |
| Coenzyme Q10            | 300 mg          | Generally well tolerated   |
| Feverfew                | 50 mg – 300 mg  | Conflicting evidence       |
| Melatonin               | 3 mg nightly    | Conflicting evidence       |

**Note:** Petasites (butterbur) not currently recommended due to concerns about liver toxicity

Continuum (Minneapolis Minn). 2021;27:613-632. Medicine (Baltimore). 2019;98:e14099.

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## Behavioral Therapies for Migraine

### Biofeedback



### CBT



### Relaxation Training



- Supported by data
- Endorsed in US Headache Consortium guidelines
- Have long-lasting benefits
- Effective at all life stages
- Can be stand alone or combined with other therapies

Headache. 2021;1021-1039. Neurology. 2000;55:754-762.

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## Answers to Frequently Asked Questions

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## When Is Imaging Warranted?



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## Imaging in Headache Disorders



There is **no necessity** to do neuroimaging in patients with headaches **consistent with migraine** with a **normal neurologic examination** and **no atypical features** or **red flags**



Don't perform neuroimaging studies in patients with **stable headaches** that meet criteria for **migraine**

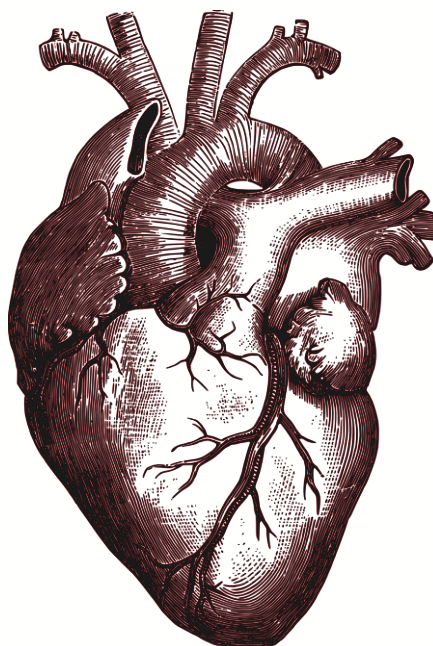
Don't perform **CT imaging** for headache when **MRI is available**, except in **emergency settings** (e.g., acute bleed)



Appropriateness Criteria® Headache — good resource for image selection in **specific clinical scenarios** (e.g., patients with known cancer)

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## Do I Need To Worry About Cardiovascular Disease with Triptans?



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## Triptans and Cardiovascular Safety

- **Chest symptoms occurring during use of triptans generally not:**
  - Serious
  - Explained by ischemia
- **While serious cardiovascular events have occurred after use of triptans, their incidence is extremely low in:**
  - Clinical trials
  - Clinical practice
- **The cardiovascular risk-benefit profile of triptans favors their use in the absence of contraindications, such as:**
  - Coronary artery disease
  - History of stroke
  - Peripheral vascular disease
  - Uncontrolled hypertension

Headache. 2004;44(5):414-25.

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# Migraine Myth Busters

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## Migraine Myth Busters

**Myth 1: Migraine = severe headache**

**Myth 2: Kids don't get migraine**

**Myth 3: Migraine head pain must be throbbing**

**Myth 4: Migraine pain is due to vasodilation**

**Myth 5: You can't diagnose migraine without aura**

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## Migraine Myth Busters

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**Myth 6: Sinusitis is a common cause of headache**

**Myth 7: Neck pain is rarely a symptom of migraine**

**Myth 8: Avoid triptans in patients with aura**

**Myth 9: Never prescribe triptans with SSRIs/SNRIs**

**Myth 10: Migraine prevention is for life**

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## In Summary

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- Make the diagnosis
  - Rule out secondary headaches
  - Provide acute treatment
  - Consider prevention
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## Online Resource Library

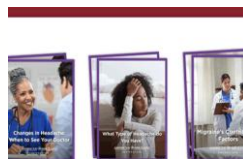
**First Contact – Headache in Primary Care** provides free educational resources to help you identify and treat migraine and other headache disorders.



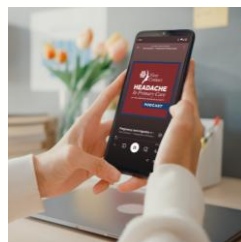
## Migraine Management Flowchart



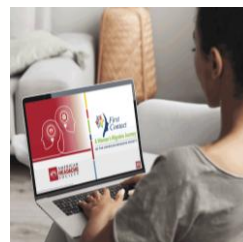
## Quick Guides



**NEW FEATURES**  
**English and Spanish Guides**



Official Podcast



### Online First Contact Presentations

[americanheadachesociety.org/resources/primary-care](http://americanheadachesociety.org/resources/primary-care)

**Learn more and explore  
our resources here:**

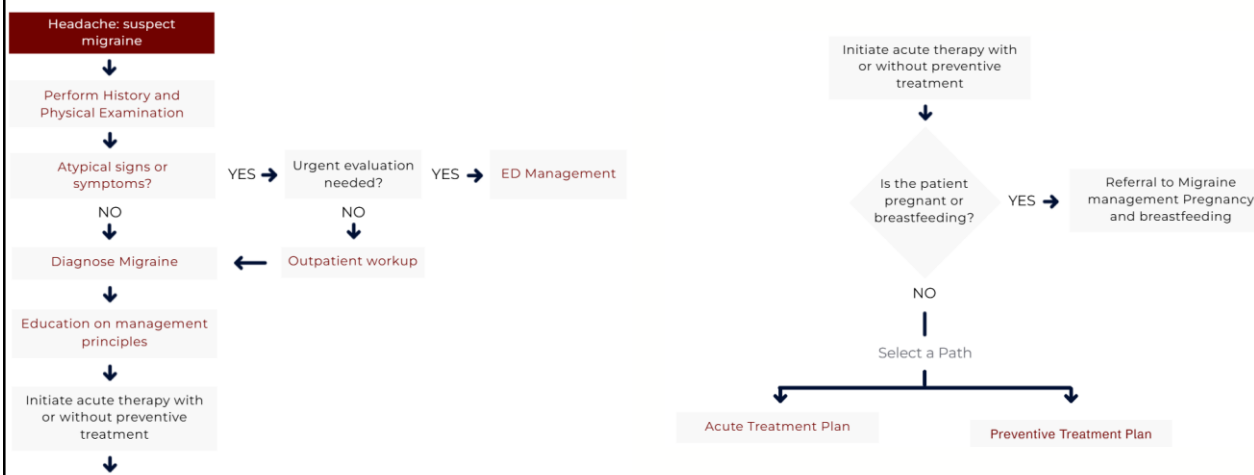


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## Check Out the Flowchart!



[americanheadachesociety.org/resources/primary-care/migraine-flowchart](https://americanheadachesociety.org/resources/primary-care/migraine-flowchart)

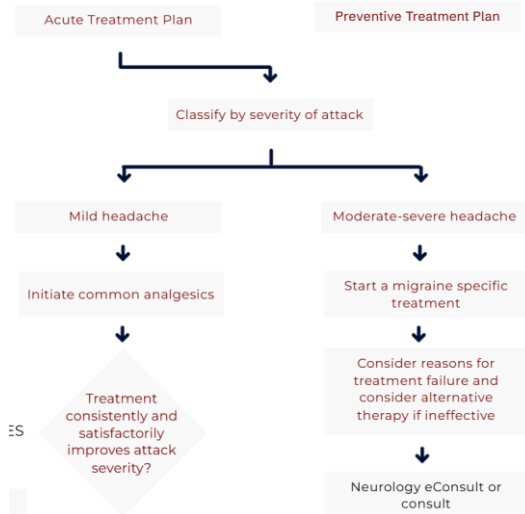


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## Check Out the Flowchart!



[americanheadachesociety.org/resources/primary-care/migraine-flowchart](https://americanheadachesociety.org/resources/primary-care/migraine-flowchart)

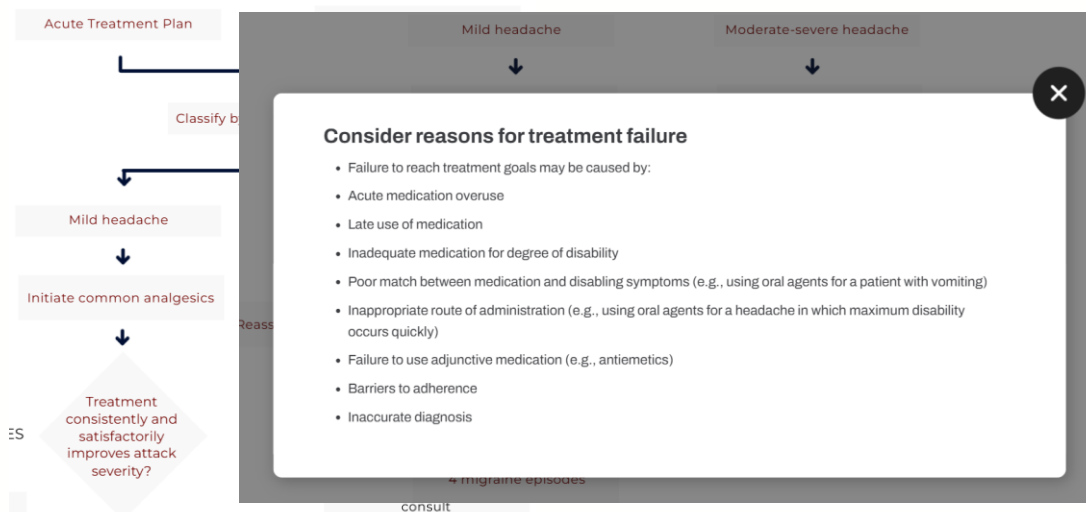


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## Check Out the Flowchart!



[americanheadachesociety.org/resources/primary-care/migraine-flowchart](https://americanheadachesociety.org/resources/primary-care/migraine-flowchart)



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## Authors

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