

Headaches

Important Headache History Questions

- Onset
- Duration of headaches
- Frequency of headaches
- Associated symptoms
- Positional component to headache?
- Abortive medications used and frequency (>3 days/week of OTC abortives can lead to medication overuse headache)
- Lifestyle (sleep, caffeine use, hydration, stressors)
- Screen for depression and anxiety
- Family history

Patient presents with headache

- Obtain history and physical
- Screen for psychosocial stressors
- Assess for red flag symptoms

Are Red Flag symptoms present?

Yes → Send patient to ED for emergent evaluation and/or imaging.

No → Classify headache based on diagnostic criteria

Migraine with or without Aura

- At least five lifetime attacks
- Pain lasts 2-72 hours
- Unilateral or bilateral pain, often pulsating
- Moderate or severe pain intensity
- Causes avoidance of routine activity
- Associated with nausea and/or vomiting, or photophobia and phonophobia
- Family history is common

Definition of "Aura"

- fully reversible visual, sensory and/or speech/language symptoms
- common visual aura symptoms: zig-zag lines, light flashes, shimmering dots (should occur in both eyes)
- each symptom lasts 5-60 min
- no motor, brainstem or retinal symptoms (e.g. vision loss in one eye)

Tension Type Headache (TTH)

- Mild to moderate pain
- Bilateral, pressing or tightening pain
- Pain lasts 30 min to 7 days
- Does not interfere with daily activity
- No nausea or vomiting
- Can have either photophobia or phonophobia

Initiate treatment plan:

- 1) Lifestyle modification
- 2) Heat or ice to head/neck
- 3) OTC analgesics
- 4) For Chronic TTH (>15 days/month for >3 months) unresponsive to above treatments, start preventive therapy

Initiate treatment plan:

- 1) Lifestyle modification
- 2) Abortive therapy
- 3) Preventive therapy

If no response to treatment in 2-3 months, refer to pediatric neurology

Red Flag Symptoms

- New neurologic deficit on exam (e.g. papilledema, weakness, numbness, cranial nerve abnormality)
- Altered mental status, confusion
- Worst headache of life
- Meningeal signs, fevers, rigors, new onset seizures
- Headaches occurring when supine or with valsalva maneuver (suggestive of increased intracranial pressure or intracranial mass)
- Waking up from sleep with new onset headache and vomiting
- Sudden loss of vision or new double vision
- Recurrent thunderclap headaches

Lifestyle Modification

- Sleep: 8-10 hours/night, consistent sleep routine
- Diet: Eat 3 healthy meals/day. Do not skip meals.
- Fluids: Drink 64-100 ounces of water daily. Avoid caffeine.
- Exercise: 30 minutes/day at least 5 times/week
- Avoid excessive heat/sun exposure
- Limit screen time and use blue light filters
- Headache Diary: Keep a log of headaches to help identify headache triggers.
 - Phone Apps: Migraine Buddy, N1 Headache, Migraine Insight
- Once identified, try to avoid triggers (e.g. wear sunglasses, avoid certain foods, etc.)
 - Common food triggers: aged cheese, artificial sweetener, chocolate, MSG, processed meats
- Mindfulness and Meditation: use relaxation techniques to manage stress and pain
 - Phone Apps: Headspace, Curable, Calm

Abortive Treatments

- Goal: Stop headache within 1-2 hours so that patient can function
- How to counsel patient: Take at onset of headache, no more than 2-3 days/week to prevent medication overuse headache.
- Over-the-Counter Medications:
 - Ibuprofen
 - Naproxen
 - Acetaminophen
- Triptans: If patient does not respond to first triptan at optimized dose, try combining triptan with NSAID. If not effective, use a different triptan. Side effects include flushing, nausea, chest pressure. Do not use in patients with heart disease, stroke, or hypertension.
 - Sumatriptan (25mg/50mg/100mg tabs or nasal spray 20 mg)
 - Rizatriptan (5mg/10mg tab or dissolving tab)
 - Zolmitriptan (2.5 mg/5 mg tab, melt or nasal spray)
- Anti-emetics: If patient has significant nausea/vomiting, offer anti-emetic which can be taken at same time as NSAID and/or triptan.
 - Zofran
 - Compazine (can combine with Benadryl to prevent extra-pyramidal symptoms)

***Screen all patients for medication overuse headache. Ask the frequency with which they use abortive medications, including over the counter medications. If patient uses abortive medication >2-3 times/week, need to optimize preventive regimen and advise to decrease frequency of abortive.

Preventive Treatments

- Goal: Decrease frequency and intensity of migraines or chronic tension type headaches over time
- Consider if patient is having >1 migraine week or >15 tension type headaches/month, especially if headaches affect school and social activities
- First Line Treatments
 - 1) Lifestyle Modification
 - 2) Nutraceuticals: Take for at least 3 months to see an effect
 - A. Magnesium Oxide 400 mg daily (side effect is diarrhea)
 - B. Riboflavin 400 mg daily (side effect is bright urine)
 - C. Can use Migrelief (combination of Magnesium, Riboflavin, and Feverfew) instead of the above
 - 3) Cognitive behavioral therapy if patient endorses anxiety and/or depression
- Second Line Treatments (choose 1)
 - 1) Nortriptyline or Amitriptyline: Can help with sleep. Side effects include dry mouth, dizziness, sleepiness, weight gain, sun sensitivity. Obtain baseline EKG to evaluate for QT prolongation.
 - 2) Topiramate or Zonisamide: Can help with weight loss. Side effects: renal stones, tingling, decreased appetite, word finding difficulties. Teratogenic and can lower efficacy of oral contraceptives so counsel adolescent females.