

Assessment

Perform thorough history, physical, and neurological examination.

- Age of onset
- Severity
- Time of day
- Triggers
- Pain description
- Intensity (0-10 pain scale)
- Associated symptoms
- Frequency of pain medication use
- Location
- Frequency of headaches
- Presence of auras
- Impact of HA on functioning (missed school/ activities)

Red Flags

Refer to ED and consider urgent imaging if one or more of the following:

- Worst headache of life or thunderclap headache
- Aura > 1 hour (visual, sensory, speech, or motor symptoms)
- Provider concerns including fever with stiff neck or confusion, fever in immunocompromised patient
- Abnormal neurologic exam

Yellow Flags

Refer for non-urgent imaging or urgent Neurology appointment if one or more of the following:

- Headache repeatedly waking from sleep
- Lack of family history of headache
- New onset vomiting upon awakening

Further evaluation will depend on imaging results

Yes

No

Yes

Refer to ED
Consider urgent imaging

Meets ICHD criteria for migraine (see reverse)

Imaging within 2 weeks:

- MRI brain without contrast preferred test
- MRA or MRV brain without contrast to be considered for vascular or coagulopathy concerns
- or Urgent referral to neurology

No

Yes

Consider alternative conditions including tension headache, sinus headache, and systemic disorders

Less than 15 HA/month

- Develop Acute Treatment Plan (see reverse).
- Consider preventative treatment if high disability or more than 1 severe HA/ week

More than 15 HA/month

- Develop Acute Treatment Plan (see reverse)
- Develop Preventative Treatment Plan (see reverse).
- Follow up visit with primary care in 6-8 weeks

Treatment plan effective in managing symptoms?

No

Yes

Refer to Neurology/Headache Center for further evaluation and management

Follow-up as needed for increased severity, frequency, impact

Preventative Treatment Plan

- Consider referral to Behavioral Medicine Clinical Psychology for CBT pain management skills training
- Consider starting amitriptyline, topiramate or nutraceuticals for HA prevention
- Follow up in 6-8 weeks to evaluate response to treatment
- Consider referral to Neurology/Headache Center if headaches are not improving or headaches disabling

Reinforce healthy habits

- Hydrate: 64oz/day; avoid caffeine; take water to school
- Exercise: 3-4 days/week for at least 30 minutes
- Meals: avoid skipping meals and eat healthy diet
- Sleep: 8-10 hours. Keep consistent sleep schedule
- Identify and manage stressors that can trigger headaches
- Instruct child to treat HA early before pain becomes severe

Acute Treatment Plan

- Fluids (sports drink) 8-12 oz. Drink quickly every time you get a headache. Avoid G2/Propel/Zero.
- Preferred options and dosing for acute rescue medications include either:
 - Ibuprofen (Motrin, Advil) - 10mg/kg; max 600mg/dose. Avoid using > 3 days/wk or >15 days/mo to prevent medication overuse. If HA > 1 hr after initial dose, take rizatriptan as below.
 - Rizatriptan (Maxalt) - 5mg if >6yo and <40kg; 10mg for >40kg; max 10mg/dose. Take with onset of HA. You may repeat rizatriptan once in 2 hrs PRN if HA persists (max 2 doses/24 hrs). Avoid using rizatriptan > 2 days/wk or >10 days/mo to prevent medication overuse.
- Using pain medication > 15 days per month? Consider analgesic-overuse headache ([Medication Overuse Guide](#)¹)
- Reassure child/family importance of continuing to function (e.g. stay at school) when has headache
- If your headache lasts longer than 72 hours and the above treatment failed, instruct patient/family to go to the nearest Emergency Department.

Nutraceutical Dosing

Coenzyme Q10	200mg once daily for at least 4 consecutive months
Vitamin D ^{2,3}	<ul style="list-style-type: none"> • 400 IU/d if normal Vit D blood level • 800 IU/d if mild Vit D deficiency • 5000 IU/d if moderate Vit D deficiency
Melatonin ^{2,4}	2-3 mg every day at bedtime
Polyunsaturated fatty acids ^{2,3}	Fish oil compound

ICHD Criteria⁵

Migraine without aura (Common migraine; hemicrania simplex)

Recurrent headache disorder manifesting in attacks lasting 4-72 hours. Typical characteristics of the headache are unilateral location, pulsating quality, moderate or severe intensity, aggravation by routine physical activity and association with nausea and/or photophobia and phonophobia.

Diagnostic criteria:

1. At least five attacks fulfilling criteria 2-4
2. Headache attacks lasting 4-72 hr (untreated or unsuccessfully treated)
3. Headache has at least two of the following four characteristics:
 - unilateral location
 - pulsating quality
 - moderate or severe pain intensity
 - aggravation by or causing avoidance of routine physical activity (eg, walking or climbing stairs)
4. During headache at least one of the following:
 - nausea and/or vomiting
 - photophobia and phonophobia

Adapted from Cincinnati Children's. "Migraine Diagnosis and Treatment Planning." June 2024. https://cincinnatichildrens.widen.net/s/zlg2zgtsb/cchmc-22106-cpst-headache_082023-final.

References

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