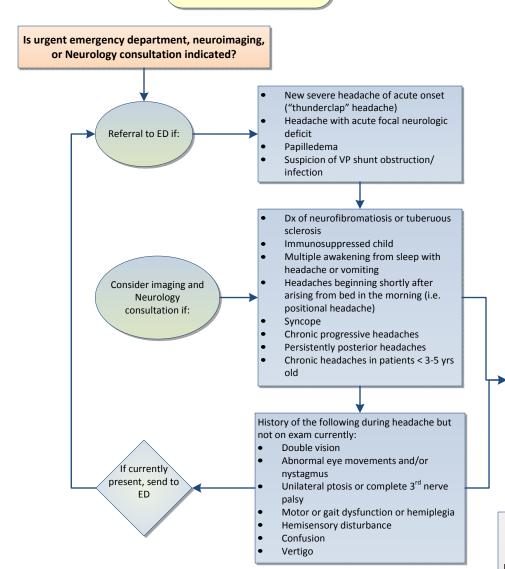
Outpatient Headache Care Guideline



Inclusion criteria: children ≥ 3 yrs with headaches

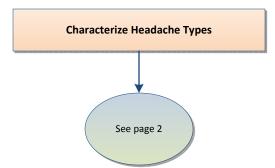


- MRI of brain w/wo contrast is preferred study (pefer MRI obtained at CHOC Children's). If hx of concussion, SWI sequence should be included in MRI study
- Urgent referral to Neurology (requires phone call to neurologist of the day)

Recommendations for All Headaches

Headache hygiene

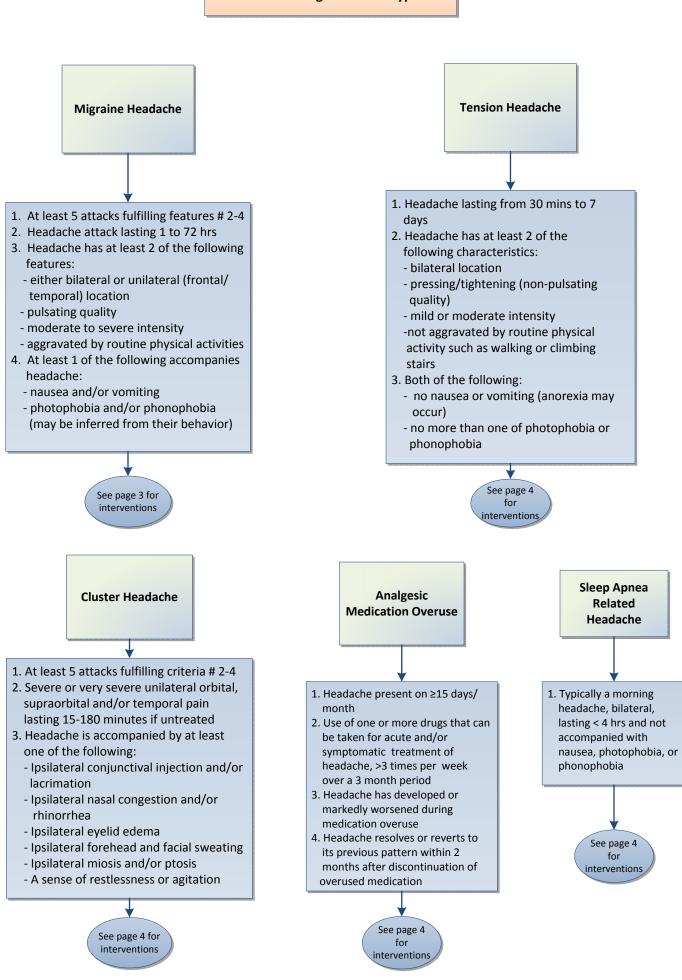
- Regular bedtime and awakening time
- Regular daily exercise
- Good hydration
- Avoid known triggers
 Non-medical interventions
 - lce pack
- Warm bath
- Nap in a cool, dark room
- Neck and back massage
- Take a walk
- If fails headache hygiene and at least one preventative treatment (min. 4 week trial), refer to Neurology.
- If responds to preventative treatment, continue for at least 3 months and re-evaluate



Approved Evidence Based Medicine Committee 5-18-16

Reassess the appropriateness of Care Guidelines as condition changes. This guideline is a tool to aid clinical decision making. It is not a standard of care. The provider should deviate from the guideline when clinical judgment so indicates

Characterizing Headache Types



Headache Treatment by Type

Migraine Headache

Abortive

Common OTC Analgesics

- Indicated for mild-moderate headache.
- NSAIDS tend to be the most effective.
 NSAIDS dosed at 10-15 mg/kg/dose and acetaminophen at 15-20 mg/kg/dose.
- Should not be used more than twice a week to prevent possible medication overuse headache and toxicity from the analgesic.

Sumatriptans

- Indicated for moderate-severe headache.
 Triptans are contraindicated in patients with cardiovascular disease, uncontrolled HTN, basilar migraine, and hemiplegic migraine.
- SUMAtriptan single dose for 6-11 years old is 25 mg. Single dose for ≥12 years old is 50 mg; can increase to 100 mg if needed. Max dose is 200 mg/24 hours.
- Typically third party payers require SUMAtriptan prior to using any other triptans
- Nasal SUMAtriptan can be used if patient has extreme nausea at onset of headache and inability to tolerate PO. Also useful if not responding well to SUMAtriptan tablets. Dosing guideline 6-12 years old 5-10 mg/ dose; >12 years old 10-20 mg/dose. No repeat dose.

Other Triptans

 Rizatriptan dosing is 5 mg < 40kg and 10 mg if > 40 kg

For all medication dosing, see order sets

Preventive

Indications: frequent headaches)> 4x/month, , prolonged, severe or debilitating headaches, failure of abortive therapy, and high risk for medication overuse headaches

Amitriptyline

- should have a normal QT interval prior to use
- Gradually increase dose q 2 wks as tolerated to effect, up to 50 mg/day
- Paitents with depression may experience worsening of depression and/or emergence of suicidal ideation

Cyproheptadine

 Generally does not work for >= 10 yrs old. May be associated with appetite stimulation and weight gain

Topiramate

 Can casue workd finding difficulty and cognitive slowing, may be useful in patients with epilepsy

Verapamil

- May be useful in patients with hypertension.
 Monitor BP when initiating and with each dose increase.
- Use in patients > 30kg. Start on 40 mg tid and titrate to effect. Once on effective dose, switch to extended release formulation if available.

Menstrual migraine

- For female patients with migraines on oral contraceptives, a low dose (35 microgram ethinyl-estradiol or less) monophasic oral contraceptive should be used as there is increase risk in venous thromboembolism and ischemic stroke.
- The use of oral contraceptives to prevent migraine is not clearly supported in studies or in the medical literature.
- Triptans are contraindicated in patients with cardiovascular disease, uncontrolled HTN, basilar migraine, and hemiplegic migraine.

Non-Prescription Preventive Supplements

 Butterbur has good evidence in adult populations for headache prevention and is promising in the pediatric populations with open label studies.
 There is risk for hepatotoxicity if improperly prepared. Two widely used preparations that appear to be safe include Petadolex (manufacturer Weber & Weber) and Swanson Superior Herbs Butterbur Extract. May be useful in patients with allergic rhinitis/conjunctivitis.

Dosing: 75 mg oral daily

 Riboflavin has moderate evidence in adult populations for headache prevention and is potentially effective in the pediatric population.
 Dosing: 400 mg oral daily

Headache Treatment by Type



Preventive

Amitriptyline

- Should have a normal QT interval prior to use
- Gradually increase dose q 2 wks as tolerated to effect, up to 50 mg/day
- Patients with depression may experience worsening of depression and/or emergence of suicidal ideation

Cyproheptadine

Generally does not work for >= 10 yrs. old. May be associated with appetite stimulation and weight gain

Topiramate

Can cause word finding difficulty and cognitive slowing, may be useful in patients with epilepsy

Abortive

Common OTC Analgesics

- Indicated for mild-moderate headache.
- NSAIDS tend to be the most effective. NSAIDS dosed at 10-15 mg/kg/dose and acetaminophen at 15-20 mg/kg/dose.
- Should not be used more than twice a week to prevent possible medication overuse headache and toxicity from the analgesic.

Non-Prescription Preventive Supplements

- Butterbur has good evidence in adult populations for headache prevention and is promising in the pediatric populations with open label studies. There is risk for hepatotoxicity if improperly prepared. Two widely used preparations that appear to be safe include Petadolex (manufacturer Weber & Weber) and Swanson Superior Herbs Butterbur Extract. May be useful in patients with allergic rhinitis/ conjunctivitis.
- Riboflavin has moderate evidence in adult populations for headache prevention and is potentially effective in the pediatric population.

Cluster Headache

Preventive

Verapamil

- May be useful in patients with hypertension. Monitor BP when initiating and with each dose increase.
- Use in patients > 30kg. Start on 40 mg tid and titrate to effect. Once on effective dose. switch to extended release formulation if available.

Abortive

Sumatriptans

- Indicated for moderate-severe headache. Triptans are **contraindicated** in patients with cardiovascular disease, uncontrolled HTN, basilar migraine, and hemiplegic migraine.
- SUMAtriptan single dose for 6-11 years old is 25 mg. Single dose for ≥12 years old is 50 mg; can increase to 100 mg if needed. Max dose is 200 mg/24 hours.
- Typically third party payers require SUMAtriptan prior to using any other triptans
- Nasal SUMAtriptan can be used if patient has extreme nausea at onset of headache and inability to tolerate PO. Also useful if not responding well to SUMAtriptan tablets. Dosing guideline 6-12 years old 5-10 mg/ dose; >12 years old 10-20 mg/dose. No repeat dose.

Other Triptans

Rizatriptan dosing is 5 mg < 40kg and 10 mg if > 40 kg

Analgesic Medication Overuse

Post

Concussive

Headache

- Enforce/reinforce headache hygiene
- Systematically wean off abortive medications. Prepare to feel worse in a couple of weeks
- reinforce non-medical interventions
- Keep a headache diary
 - Continue preventive therapy if indicated as in Tension Headache Algorithm

Sleep Apnea Related Headache

- Polysomnography
 - Refer to Pulmonary

OTC Analgesics

- Non-prescription preventive supplements
- For isolated, persistent post-concussive headaches for more than 3 months, an MRI of the brain without contrast and with SWI sequence is the preferred neuroimaging study (prefer MRI obtained at CHOC Children's)
- Consider Neurology referral

References Outpatient Headache Care Guideline

Holland S, Silberstein SD, Freitag F, et al. Evidence-based guideline update: NSAIDs and other complementary treatments for episodic migraine prevention in adults: report of the Quality Standards Subcommittee of the American Academy of Neurology and the American Headache Society. Neurology. 2012;78(17):1346-53.

Lewis DW, Ashwal S, Dahl G, et al. Practice parameter: evaluation of children and adolescents with recurrent headaches: report of the Quality Standards Subcommittee of the American Academy of Neurology and the Practice Committee of the Child Neurology Society. Neurology. 2002;59(4):490-8.

Lewis D, Ashwal S, Hershey A, et al. Practice parameter: pharmacological treatment of migraine headache in children and adolescents: report of the American Academy of Neurology Quality Standards Subcommittee and the Practice Committee of the Child Neurology Society. Neurology. 2004;63(12):2215-24.

Patniyot IR, Gelfand AA. Acute Treatment Therapies for Pediatric Migraine: A Qualitative Systematic Review. Headache Jan 2016, 56:49-70.

Silberstein SD, Holland S, Freitag F, et al. Evidence-based guideline update: pharmacologic treatment for episodic migraine prevention in adults: report of the Quality Standards Subcommittee of the American Academy of Neurology and the American Headache Society. Neurology. 2012;78(17):1337-45.