

Children’s Wisconsin

Co-Management Guidelines

To support collaborative care, the Jane B. Pettit Pain and Headache Center has developed guidelines for our community providers to utilize when managing and referring patients with headaches. These guidelines provide protocols to allow joint management of patient cases between community providers and our pediatric headache specialists.

Headache										
Diagnosis/symptom	Referring provider’s initial evaluation and management:	When to initiate referral/ consider refer to Headache Clinic:	What can referring provider send to HEADACHE Clinic?	Specialist’s workup will likely include:						
<p>PRIMARY Headaches Disorder by themselves. Caused by independent pathomechanisms and NOT by other disorders.</p> <ul style="list-style-type: none"> Migraines Tension-type Trigeminal autonomic cephalalgia (TACs) <p>SECONDARY Headaches Developed as a secondary symptom due to another disorder that is known to cause headaches.</p> <ul style="list-style-type: none"> Trauma / Injury Cranial / Vascular Pseudotumor –Idiopathic Intracranial Hypertension Medication Over-use Infection Homoeostasis 	<p>Initial Evaluation (Screening Tools)</p> <ul style="list-style-type: none"> Annual/Updated DILATED eye exam Baseline labs: <table border="1"> <thead> <tr> <th>Lab Evaluation</th> <th>Treatment</th> </tr> </thead> <tbody> <tr> <td>CBC</td> <td>> if MCV/MCH/MCHC low – common in dark skin ethnicity, possible thalassemia > if MCV/MCH/MCHC high – possible B12/Folate deficit > Normal H&H excludes anemia</td> </tr> <tr> <td>Ferritin</td> <td>> If <15, treat 325 mg every day > If 16-20, treat 325 mg every other day > Work to rebuild to 40-60 for athletes</td> </tr> </tbody> </table>	Lab Evaluation	Treatment	CBC	> if MCV/MCH/MCHC low – common in dark skin ethnicity, possible thalassemia > if MCV/MCH/MCHC high – possible B12/Folate deficit > Normal H&H excludes anemia	Ferritin	> If <15, treat 325 mg every day > If 16-20, treat 325 mg every other day > Work to rebuild to 40-60 for athletes	<ul style="list-style-type: none"> When consistent life-style choices do not improve headaches When headaches are unable to be managed with break-through medications When considering daily preventative medication for headache management When headaches get worse New headache symptoms develop Frequently missing school due to headaches The child or adolescent appears to have difficulty managing stress, worry, or pain Child or family preference 	<p>Internal Provider using Epic:</p> <ul style="list-style-type: none"> Place Ambulatory Referral to HEADACHE CLINIC <p>External Provider using EPIC:</p> <ul style="list-style-type: none"> Please complete the external referral order to CHW PAIN AND HEADACHE CLINICS or Fax to Central Scheduling (414) 607-5280 <p>In order to help triage our patients and maximize the visit It would also be helpful to include:</p> <ul style="list-style-type: none"> Urgency of the referral What is the patient’s chief complaint Pertinent past medical history Abnormal lab or imaging findings 	<p>After referral to HEADACHE Clinic:</p> <ul style="list-style-type: none"> Evaluation by a physician or nurse practitioner and, possibly, a psychologist Psychosocial assessment of the child or adolescent’s school, home, social, and emotional functioning We may recommend more targeted mental health services within our clinic or the community Recommendations for lifestyle modifications Possible further work-up which MAY include labs, imaging (if indicated), referrals Please note we do not image all patients referred to our clinic
Lab Evaluation	Treatment									
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<ul style="list-style-type: none"> Cranium/neck/eye/ears/nose/sinus/teeth/mouth Psychiatric <p style="text-align: center;">OTHER</p> <p>Caused by a lesion or disease of the somatosensory nervous system. Characterized by pain in the distribution of a nerve or nerves.</p> <ul style="list-style-type: none"> Trigeminal neuralgia Other <p>Most common in Primary Care setting for children:</p> <p>Pediatric Migraine: ICHD – II</p> <p>A. At least five attacks fulfilling criteria B – D</p> <p>B. Headache attacks last 2 – 72 hours (untreated or unsuccessfully treated)</p> <p>C. Headache has at least two of the following four characteristics:</p> <ul style="list-style-type: none"> Unilateral location (often bilateral in pediatrics) Pulsating, throbbing, pain Moderate to severe pain intensity Aggravation by or causing avoidance of routine physical activity <p>D. During headache at least one of the following:</p> <ul style="list-style-type: none"> Nausea and/or vomiting Photophobia and phonophobia 	<p>Vitamin D</p> <p>> If 25-30, treat 2,000 IU daily > If <25, treat 50,000 IU weekly for 8 weeks, then 2,000 IU daily thereafter</p>		<ul style="list-style-type: none"> What is the key question you want addressed Does patient have psychosocial stressors or mental health concerns List of failed headache medications Whether or not the patient has had a recent eye exam Whether or the patient has a therapist Number of school absences due to headache 	<ul style="list-style-type: none"> Recommendations for medication management Anticipated follow up with medical provider and/or psychologist
	<p>TSH w/reflex</p> <p>> If out of range, redraw levels to verify > Assess for signs hypo/hyperthyroidism > If continued out of range, refer to Endocrinology</p>			
	<p>Additional labs (optional): B12, Folate</p> <p>> If concerns not eating red meats/green leafy vegetables OR excessive dairy intake; signs of neuropathy</p>			
	<p>PT, PTT</p> <p>> If concerns of easy bruising, recurrent epistaxis, females with heavy menstrual cycles</p>			
	<p>IMAGING Evaluation (MRI)</p> <p>> New onset, severe headache > “Worst headache ever” > Child is <6 years old > Occipital headache > Abnormal neurological exam > Headache with systemic disease or symptoms, neurological signs or symptoms, worsening acutely/progressive</p>			



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<p>E. Not better accounted for by another diagnosis</p> <p><u>Migraine with aura</u></p> <p>A. Fully reversible sensory disturbances occurring up to 60 minutes before headache pain</p> <p>B. Includes visual (e.g., wavy lines, blind spots, flashes of light), auditory (ringing in the ears), motor weakness, paresthesia of the hand, face, lips, tongue, difficulty speaking</p> <p>Tension-Type Headache: ICHD – II</p> <p>A. < 15 days/month and fulfilling criteria B – D</p> <p>B. Headache lasting from 30 minutes to 7 days</p> <p>C. Headache has at least two of the following characteristics:</p> <ul style="list-style-type: none"> • Bilateral location • Pressing/tightening pain (non-pulsating) • Mild or moderate pain intensity • Not aggravated by routine physical activity <p>D. Both of the following:</p> <ul style="list-style-type: none"> • No nausea or vomiting (anorexia may occur) • No more than one of photophobia or phonophobia 	<table border="1" data-bbox="688 191 1163 521"> <tr> <td data-bbox="688 191 849 521"></td> <td data-bbox="849 191 1163 521"> symptoms, nocturnal awakening, early morning vomiting, history of trauma, papilledema or diplopia, and/or exertional or positional aspects </td> </tr> </table> <p>Management</p> <ul style="list-style-type: none"> • S.M.A.R.T. Life Style Choices: <ul style="list-style-type: none"> ○ See Table I • Basic School Accommodations: <ul style="list-style-type: none"> ○ See Table II • Medication <ul style="list-style-type: none"> ○ See Table III 		symptoms, nocturnal awakening, early morning vomiting, history of trauma, papilledema or diplopia, and/or exertional or positional aspects			
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<ul style="list-style-type: none"> • Not attributed to another disorder <p>Medication Overuse Headache: ICHD – VIII</p> <p>A. ≥ 15 days/month and fulfilling criteria B-C</p> <p>B. Regular overuse of >3 months of one or more acute/symptomatic treatment drugs</p> <ul style="list-style-type: none"> • Ergotamine, triptans, opioids, or combination analgesic medications ≥ 10 days/month on regular basis for >3 months • Simple analgesics or any combination of ergotamine, triptans, analgesic opioids on ≥ 15 days/month on regular basis for >3 months without overuse of any single class alone <p>C. Developed or markedly worsened during medication overuse</p>				
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MANAGEMENT TABLE I: S.M.A.R.T. LIFESTYLE CHOICES

<p>S – Sleep</p>	<ul style="list-style-type: none"> • Recommend 8 – 10 hours of sleep in a row at night • Keep consistent bedtimes & wake times (no more than 1 – 2 hours variation) • Avoid daytime naps, which can disrupt nighttime sleep cycle • Avoid being on electronics/screens 30-60 minutes before getting into bed
<p>M -- Meals / Drink / Caffeine</p>	<ul style="list-style-type: none"> • Eat 3 meals a day plus snacks • Do not skip meals • Drink water every day –drink an ounce for every kg of weight



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	<ul style="list-style-type: none"> Avoid caffeine and artificial sweeteners
A – Physical activity/exercise	<ul style="list-style-type: none"> Do 30 – 60 minutes a day for 3 – 4 days a week
R – Relaxation / CBT / Biofeedback	<ul style="list-style-type: none"> Use good stress management: identify parts of stressful circumstances you can control and make changes, make time for activities you enjoy (exercise, hobbies, etc.), talk with others, journal, and/or engage in relaxing activities (listening to soothing music, yoga, massage, meditation). Find a quiet activity to try to distract from the pain Rest in a quiet, dark room until pain is more manageable. Put a cool washcloth or ice pack where it hurts. Relaxation apps for home use: <i>Calm, MyLife</i>
T – Trigger avoidance	<ul style="list-style-type: none"> Identify stress-related triggers Limit medication to no more than 2-3 out of 7 days per week Wear glasses as prescribed AVOID triggers—nitrates, hard cheese, caffeine, strong odors, bright/flashing lights AVOID/REDUCE stress – good/bad, happy/sad, physical/emotional Maintain a headache diary tracking symptoms, possible triggers, frequency, and alleviating factors

MANAGEMENT TABLE II: BASIC SCHOOL ACCOMODATIONS

Encourage regular/daily attendance	
Eating and drinking	<ul style="list-style-type: none"> Allow use of a water bottle to stay hydrated Allow the student to use the restroom as needed Allow student to eat snacks during the day
Rest to reduce stress	<ul style="list-style-type: none"> Provide a quiet resting place during pain Allow student to leave class without drawing attention Give student short breaks of 10 to 30 minutes, then expect them to return to class
Medicine	<ul style="list-style-type: none"> Allow the student quick access to medicines to help control pain Follow dosing as written by medical staff Keep extra doses at school



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Academic help and support	<ul style="list-style-type: none"> • Headaches can make concentration and learning hard. Some students may need: <ul style="list-style-type: none"> ○ Extra school support or other accommodations ○ A Health Plan or 504 Plan to address a health concern ○ Individual Education Plan (IEP) to address learning difficulties
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MANAGEMENT TABLE III: MEDICATION

Medication – Please see table below

1. Avoid medication overuse. Do not use breakthrough medications more than TWO TREATMENT days/week
2. Use breakthrough medication at first sign of pain.
3. NO opioids, except low dose tramadol, if refractory migraines.
4. Preventive medications may be introduced when the child or adolescent is experiencing more than two headaches weekly IF:
 - Maintaining all expected life style changes (as noted above)
 - No causes found for headaches during work up process
 - Not overusing break-through medications (per guidelines listed above)
5. The goal of a preventive medication is to reduce the frequency, intensity, and/or duration of a headache by 50%, improve the child’s response to breakthrough medications, and/or eliminate medication overuse headaches. Preventive medications typically take 6-8 weeks at the correct dose before they provide benefit.

MANAGEMENT TABLE III: BREAK-THROUGH MEDICATIONS

Medication Class / Medication Name	Dosing	Dosing Forms	Common Side Effects	Notes
Prescription NSAIDS				
Celecoxib (Celebrex)	100 mg BID PRN	100 mg, 200 mg		
Diclofenac	2 - 4 mg/kg divided q8-12h PRN Max 200 mg/day		GI upset Bruising Itching Ringing in ears Dark urine Jaundice Insomnia Nervous/irritated	Can decrease GI side effects if taken with food
Ibuprofen	10 mg/kg q6h PRN	200 mg, 400 mg, 600 mg, 800 mg 100 mg/5 ml		
Naproxen (versus Aleve OTC)	5-10 mg/kg q8-12h PRN	250 mg, 375 mg, 500 mg 125 mg/5 ml		
Meloxicam (Mobic)	30 kg 3.75 mg 60 kg 7.5 mg ≥60 kg max 15 mg	QD prn		
Over-the-counter				



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Acetaminophen	10 - 15 mg/kg q4-6h PRN			
Acetaminophen + Caffeine (Excedrin Tension)	25 kg 1 tab, 50 kg 1.5 tab >70 kg 2 tab q6 PRN	500 mg-65 mg per tab = 1cup coffee		NO ASPIRIN: Do not give Excedrin Migraine (contains aspirin) or Fioricet (contains butalbital)
Triptans - Migraine only				
Rizatriptan (Maxalt)	<40 kg: give 5 mg once >40 kg: give 10 mg once If >12yrs old, may repeat in 2h if pain continues		<ul style="list-style-type: none"> • Palpitations, increased heart rate • Throat or chest tightness • Tingling hands/feet • Anxiety • Drowsiness 	<ul style="list-style-type: none"> • FDA-approved for kids aged 6 years and older • Take at first sign of migraine <p>CAUTION: Do not use if –</p> <ul style="list-style-type: none"> • patients with cardiac history • cerebrovascular syndromes • peripheral vascular disease • complex migraines
Sumatriptan (Imitrex)	<p><u>Tablet:</u> 25 mg, 50 mg or 100 mg</p> <p><u>Nasal:</u> <38 kgs: 10 mg >38 kgs: 20 mg</p> <p><u>Injection:</u> 3 – 6 mg</p> <p>If >12yrs old, may repeat in 2h if pain continues</p>		<ul style="list-style-type: none"> • Palpitations, increased heart rate • Throat or chest tightness • Tingling hands/feet • Anxiety • Drowsiness 	<p>Not FDA approved in kids (for < 12 years)</p> <ul style="list-style-type: none"> • Take at first sign of migraine <p>CAUTION: Do not use if –</p> <ul style="list-style-type: none"> • patients with cardiac history • cerebrovascular syndromes • peripheral vascular disease • complex migraines

REFERENCES

1. Casanova, A., Vives-Mestres, M., Donoghue, S., Mian, A., & Wober, C. (December 2022). The role of avoiding known triggers, embracing protectors, and adhering to healthy lifestyle recommendations in migraine prophylaxis: Insights from a prospective cohort of 1125 people with episodic migraine. *Headache*. 63: 51-61. <https://www.wileyonlinelibrary.com/journal/head>
2. Lisicki, M. & Schoenen, J. (November 2021). Old Habits Die Hard: Dietary Habits of Migraine Patients Challenge our Understanding of Dietary Triggers. *Frontiers in Neurology*. 12: Article 748419. <https://www.frontiersin.org>



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3. Raucci, U., Boni, A., Evangelisti, M., Della Vecchia, N., Velardi, M., Ursitti, F., Terrin, G., Di Nardo, G., Reale, A., Villani, A., & Parisi, P. (February 2021). Lifestyle Modifications to Help Prevent Headache at a Developmental Age. *Frontiers in Neurology*. 11: Article 618375. <https://www.frontiersin.org>
4. Stockburger, S. (2016). Headache in children and adolescents. *Journal Pain Management*. 9(2): 111-116

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