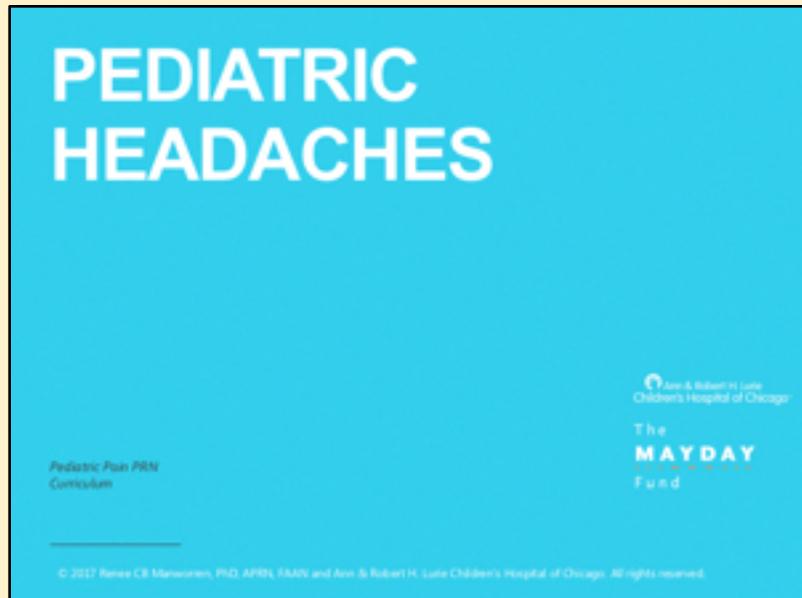


PRN Program: Headaches



Materials: Flip chart or whiteboard and Markers
Provide participant guide at least one week in advance

Room Setup: In tables of 4 or 6-8 depending on number of participants

- Display slide as participants walk in
- This session is **45 minutes**

Welcome and Introductions: *Introduce facilitator if necessary*

READ: The learning objectives for this content are to:

- Identify the common types of headache and the factors to consider in evaluating a pediatric patient who presents with headache.
- Describe the different types of migraine and the differences in approach in treatment of acute migraine and status migrainous.
- Describe the features of other primary and secondary headache disorders.

ASK: Do any of you have a headache right now or suffer from headaches? Tell us about how they feel, how you prevent them and how you treat them.

*Select participants willing to share their answers to this question.
Write on flipchart or whiteboard **[Limit discussion to 4 minutes]**
[5 MINUTES of 45 minute session is complete]*

PRN Program: Headaches

Pediatric headache: prevalence and classification

Etiology dictates treatment plan
If unknown cause, goal is pain relief or reduction

- 60% of children experience a headache in a 3 month period
- 4% of preschoolers
- 10% of school-aged children (girls 1:1 boys)
- >16% of adolescents (more girls 3:1 boys)
- 17% reporting severe headache in the last year

Headache classification

- Primary
- Secondary



READ: Prevalence of headache increases with age
Most children who have headache have a family history of headache.

- Primary headache - *Accounts for 90% of all headaches. include migraine and tension-type headaches*
- Secondary headache - *Associated with underlying conditions such as head trauma, infection, and tumor. Head pain can also result from syndromes involving the eyes, ears, neck, teeth, or sinuses.*

ASK: What are the common types of headache and the factors to consider in evaluating a pediatric patient who presents with headache?

Select participants willing to share their answers to this question. Write on flipchart or whiteboard with label Primary and Secondary

[Limit discussion to 3 minutes]

[8 MINUTES of 45 minute session is complete]

PRN Program: Headaches

Headache evaluation



In addition to obtaining a thorough comprehensive pain history, determine:

- Is this the first evaluation?
- Has the child already been diagnosed with migraines but there had been a sudden change?
- Is the child able to play during the headache?
- Is the headache getting less responsive to treatment?
- Are there any known triggers of headache?
- Are there associated symptoms?

READ:

- Is this the first evaluation even though the headaches have been occurring for sometime?
- Has the child already been diagnosed with migraines but there had been a sudden change in character of the headache or behavior of the child?
- Is the child able to play during the headache or does the child seek a dark and quiet place?
- Is the headache getting less responsive to treatment (possible analgesic overuse)?
- Are there any known triggers of headache such as certain foods, chemical exposures or stressors?
- Are there associated symptoms? Aura? Night wakening? Vomiting? visual changes, sensory and motor changes, cognitive impairment, others?

ASK: What red flags do you listen for when you're interviewing the child/family?

Select participants willing to share their answers to this question.

*Write on flipchart or whiteboard **[Limit discussion to 3 minutes]***

[12 MINUTES of 45 minute session is complete]

PRN Program: Headaches

Headache evaluation



Red flags: when to worry

- Awakens child
- Onset: sudden, abrupt, split-second (thunderclap)
- Neurologic symptoms or abnormal findings
- Worse when lying down, coughing, Valsalva
- Recurrent, localized
- Lasting more than 6 months
- Systemic symptoms (fever, weight loss)
- Previous headache history or headache progression

ASK: What questions would you ask to uncover these red flags?

Select participants willing to share their answers to this question.

Write on flipchart or whiteboard [Limit discussion to 3 minutes]

READ: these Key points (*if not included by participants*):

- **Does the patient awaken with the headache?** This may point to migraine, hypertension, sleep apnea, space occupying lesions or other causes.
- **Is this the child's first headache and they are presenting for evaluation because it is so severe?** Such a headache may be indicative of a subarachnoid hemorrhage (sentinel headache).
- **Is the headache getting progressively worse** (suggesting brain neoplasm)?
- A headache that gets worse when the patient lies flat or is worsening over time might indicate increased intracranial pressure
- Most patients with headache are completely intact neurologically. If a patient has ataxia or weakness; nuchal rigidity, signs of trauma or skin lesions it is time to worry.

[15 MINUTES of 45 minute session is complete]

PRN Program: Headaches



The slide features a light blue circular icon with a white wrench symbol on the left. To its right, the name 'Marla' is written in a large, dark font. Below the icon, the text asks 'How will you assess Marla's headache symptoms?'. To the right of the name, a short paragraph describes Marla as a 10-year-old girl with a severe headache, followed by two bullet points: 'Has had headaches; treated with ibuprofen and rest' and 'No recent injury or environment/school changes'.

ASK: How will you assess Marla's headache symptoms?

With your **table** discuss your answers to the question on the slide **[This is a 5 minute case, give groups 3 minutes to discuss case and 2 minute to share answers to each question]** Select a participant to share their groups' answers. Write on flipchart or whiteboard

READ: these Key points (**if not included by participants**):

- Obtain a detailed headache history
 - Onset, typical location, what does it feel like, what makes it better, what makes it worse?
- Identify any accompanying factors
 - Nausea/vomiting, phono/photophobia, aura, ability to sleep, what does child usually do during headaches, fever?
- Identify factors that are possible causes of headache
 - Caffeine
 - New stressors
 - New food intake
- Assess for red flag symptoms.

[20 MINUTES of 45 minute session is complete]

PRN Program: Headaches

Migraine



- An inherited, chronic disorder with episodic attacks
- Children 3-7y (1-3%), Adolescents (8-23%)
- More common in girls than in boys
- Focus treatment on prevention to reduce frequency and severity of headaches

Types of migraines

- Status migrainous
- Migraine with aura
- Migraine without aura

ASK: Describe the different types of migraine and the differences in approach in treatment of acute migraine and status migrainous.

Select participants willing to share their answers to this question.

Write on flipchart or whiteboard [Limit discussion to 3 minutes]

READ: these Key points (**if not included by participants**):

- Status migrainous - A debilitating migraine that lasts for 72 hours or greater is defined by the International Headache Society as status migrainous.
- Migraine without aura - At least 5 attacks lasting 1 to 72 hours that has at least two of the following symptoms:
 - Pulsating, not occipital, moderate to severe pain, worsened with activity and one of the following : nausea and/or vomiting, sound or light sensitivity. These symptoms may be assumed when a child is avoiding light or sound. An occipital location is a symptom that requires further work-up.
- Migraine with aura -Visual disruptions, hemiparesis, and aphasia: regional neuronal depolarization and oligemia caused by cortical spreading depression
 - Migraine with aura is less common in children. Often children who have aura do not have headache.

[23 MINUTES of 45 minute session is complete]

PRN Program: Headaches

Treatment plan for migraines



- Stress
- Fatigue
- Illness
- Fasting
- Dehydration
- Food

Manage Triggers

Use Pharmacologic Treatment

- Abortive: NSAIDs, Triptans, Opioids
- Preventative: Cyproheptadine, Antiepileptics, Tricyclic antidepressants

Consider Nutraceuticals

ASK: How do you counsel patients to manage these triggers and treat migraines?

*Select participants willing to share their answers to this question. Write on flipchart or whiteboard **[Limit discussion to 3 minutes]***

READ: these Key points (**if not included by participants**):

- Food triggers are unusual in children but some do identify certain offending foods. caffeine is a common one.
- Stress or “let-up” from stress, poor sleep, fatigue, skipping meals and low fluid intake can set off a migraine.
- **It is essential to develop a treatment and rescue plan.**
- **Abortive therapy is essential for acute attack management.**
 - The first-line treatment is use of OTC NSAIDs in weight-based dosing to relieve migraine headache. It is most effective if taken at the first sign of migraine.
 - For severe headaches a small amount of caffeine can be added, such as a caffeine containing soda. Caffeine can be a trigger too.
 - Riboflavin/vitamin B2, Melatonin, Magnesium oxide, Coenzyme Q10 (CoQ10), Migralief (B2/magnesium/feverfew), Butterbur extract. Generally, these are thought to have a low risk of causing harm.

[26 MINUTES of 45 minute session is complete]

PRN Program: Headaches

Other headaches



Tension-type headache

- Most common type of primary headache
- Headache lasting 30 min to 7 days
- May be episodic or chronic
- Not accompanied by nausea, vomiting, photophobia or phonophobia

Chronic daily headache

- Primary HA \geq 15days per month lasting >4hours
- Prevalence in children unknown
- Four types: Chronic migraine, Chronic tension type headache, New daily persistent headache, Hemicrania continua

ASK: Describe features of other primary and secondary headache disorders and How do you manage a tension headache?

Select participants willing to share their answers to this question. Write on flipchart or whiteboard [Limit discussion to 2 minutes]

READ: these Key points (**if not included by participants**):

- New daily persistent headaches have a sudden onset and thus patients that present with this disorder should receive a full evaluation for secondary causes.
- The management of tension headaches involves good headache hygiene, NSAIDs and acetaminophen as well as utilization of mind-body modalities.

[28 MINUTES of 45 minute session is complete]

PRN Program: Headaches



Long-term goals for managing headache pain

- Reduce frequency
- Reduce reliance on ineffective acute medications
- Improve quality of life
- Balance biobehavioral with pharmacology

Biobehavioral treatments include:

- Stress management
- Sleep hygiene
- Exercise
- Dietary modifications

READ: *Long-term goals for management headache pain*

- Reduce frequency
- Reduce reliance on ineffective acute medications
- Improve quality of life
- Balance biobehavioral with pharmacology

Once the primary headache is under control it is important that the patient and their family focus on prevention.

Having a good life balance will help prevent migraines.

This means regular eating habits and sleeping hygiene.

It also means getting frequent exercise.

Patients may be told to avoid certain foods such as caffeine, chocolate, aged cheese, cured meats or citrus.

PRN Program: Headaches

SMART headache management	
S	Regular and sufficient sleep
M	Regular and sufficient meals and hydration
A	Regular aerobic exercise
R	Relaxation and stress reduction
T	Trigger avoidance

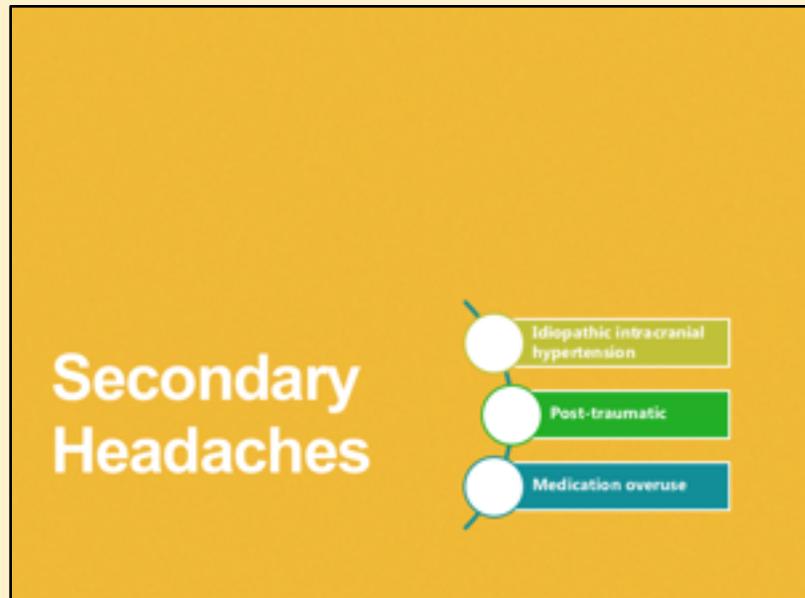
READ:

- Good headache hygiene requires regular sleep, meals and exercise.
- Reduction of stress through yoga or relaxation exercises is helpful.
- Of course, avoiding triggers is essential.

This pneumonic will help you remember the components of good headache hygiene.

[30 MINUTES of 45 minute session is complete]

PRN Program: Headaches

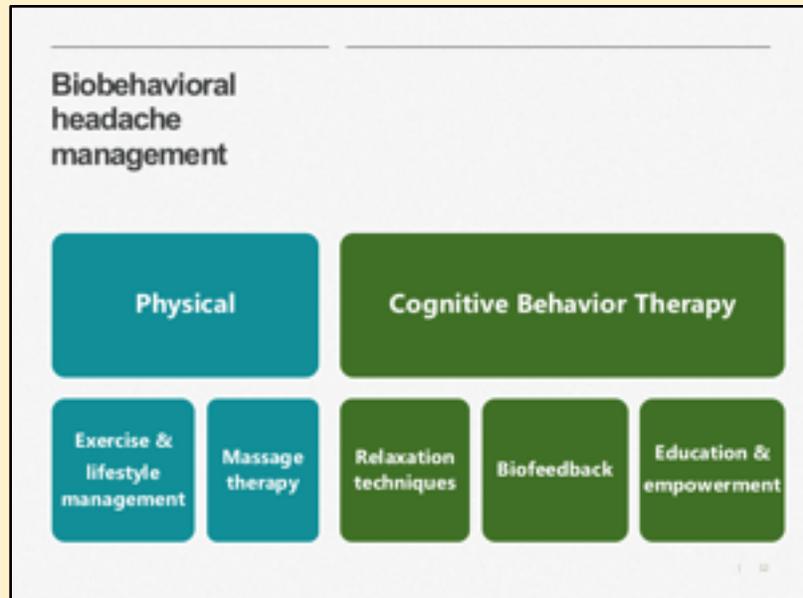


ASK: Describe these types of secondary headache?

*Select participants willing to share their answers to this question.
Write on flipchart or whiteboard **[Limit discussion to 3 minutes]***

[33 MINUTES of 45 minute session is complete]

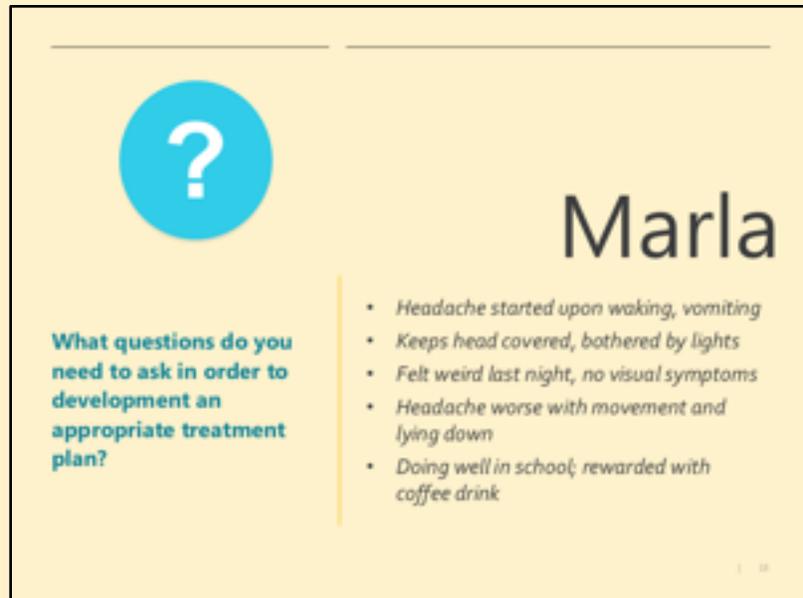
PRN Program: Headaches



READ:

- Although there are limited studies in pediatric patients biobehavioral treatment of headaches is considered critical.
- Engaging a pain psychologist for cognitive behavioral therapy, enrolling in a wellness program, participating in physical therapy with a structured exercise program, and improving sleep hygiene may be beneficial.

PRN Program: Headaches



What questions do you need to ask in order to development an appropriate treatment plan?

Marla

- Headache started upon waking, vomiting
- Keeps head covered, bothered by lights
- Felt weird last night, no visual symptoms
- Headache worse with movement and lying down
- Doing well in school; rewarded with coffee drink

ASK: What questions do you need to ask in order to development an appropriate treatment plan?

Select participants willing to share their answers to this question. Write on flipchart or whiteboard [Limit discussion to 3 minutes]

READ: these Key points (**if not included by participants**):

- Emphasize: A careful assessment is essential: thorough characterization of the headaches themselves and their impact on function and quality of life.
- As this patient is reporting worsen with lying down and new symptoms such as being awoken from sleep she will need further work-up.

[37 MINUTES of 45 minute session is complete]

PRN Program: Headaches



Marla's treatment plan:

- Workup
- Triggers
- Rescue plan

Marla

Case summary

- Work-up was negative
- Patient improved with hydration, ketorolac
- Discussed triggers
- Reviewed rescue plan: naproxen, rizatriptan
- Discussed SMART headache management
- Shared video as part of education

Migraine: How it works and how to get it under control (7:30)

READ:

So Marla's work-up is done, how does this case relate to your work area? How much of this case would be performed in your area or referred to others, and who would you refer Marla too?

If there's 7:30 left, you can play the video:

<https://www.youtube.com/watch?v=JrCdyuDsg6c>

**PRN
Program:
Headaches**

In Summary

ASK: Are there any questions?

[45 MINUTES SESSION COMPLETE]