Headaches in Children and Adolescents

Pediatric Neurology

NATIONWIDE CHILDREN’S
When your child needs a hospital, everything matters.™
Approximately 60 percent of children experience occasional headaches. Most of these children never present to a physician. However, 9.6 percent of females and 6 percent of males under the age of 20 have migraines, and many of them present for care.

**Headache vs. Migraine: Making the Right Diagnosis**

Many of us were taught that a migraine headache was a severe, unilateral pounding headache and to look for history of an aura. In pediatrics, using those criteria will miss most migraines. Only about 10 percent of pediatric migraineurs will have an aura, and younger patients may not notice or be able to describe an aura if it is present.

Better criteria for diagnosing pediatric migraine are
- Moderate to severe headache
- Associated autonomic signs such as
  - Photophobia
  - Phonophobia
  - Nausea/vomiting
  - Dizziness

In adults, migraines usually last at least four hours, but the duration may be much shorter in the pediatric population.

If the diagnosis is unclear, the specialists at the Headache Clinic at Nationwide Children's Hospital are available for consultations or referrals.

**Is It a Brain Tumor?**

Despite parents’ common concern, it is exceedingly rare for headache to be the presenting complaint of a brain tumor. However, the following “red flags” should increase your level of suspicion of a serious underlying cause:
- No family history of headaches
- Progressive headache (A headache that has been slowly but consistently worsening over weeks to months may represent increasing intracranial pressure.)
- Systemic findings on your exam
- Neurologic findings on your exam
- Sudden onset
- Worst headache of child’s life
- Headache that awakens a child or teen from a sound sleep and is associated with nausea and vomiting
- Headaches in the back of the head (Migraine and tension-type headache pain is almost always frontal or temporal in location.)

If any of these red flags exist, further workup for a serious underlying issue or a referral to a pediatric neurologist may be indicated, based on your level of concern. Patients without any of these generally do not need CT scans, MRIs or EEGs for their headaches or migraines.
**Lifestyle Management**

The following lifestyle issues often exist for migraineurs and should be addressed for optimal care:

- **Diet** – Migraine sufferers must eat three meals a day. Skipping meals is often the cause of headaches.
- **Naturalistic therapies** – Supplementation with magnesium and riboflavin, a B vitamin, has been shown to be advantageous in the long-term care of the migraine patient.
- **Sleep** – Adequate sleep is vital for health and wellbeing, particularly for headache sufferers.
- **Hydration** – Poor hydration is often the cause of migraines, especially in the summer.
- **Caffeine** – Though caffeine is present in a number of over-the-counter medications for migraines, we recommend caffeine avoidance because the frequent intake of caffeinated products is one of the most common causes of medication-overuse headache. Excessive caffeine intake can be dehydrating and interfere with sleep, as well.
- **Exercise** – Studies have shown that good exercise habits can decrease migraine frequency and intensity.
- **Psychological support** – Many of these patients are under stress from school, work, family or other relationships. These stressors should be addressed for optimal treatment. In some instances, treatments such as biofeedback and relaxation therapy may be helpful.

**Medical Management**

Migraines seldom respond adequately to acetaminophen, but NSAID medications such as ibuprofen or naproxen may resolve symptoms.

For patients who do not respond to NSAIDs, a triptan may be prescribed. Rizatriptan (Maxalt) is approved for ages 6 years and up by the FDA and is available as a melt-away tablet.

**Medication Tips**

- To avoid a medication-overuse headache, patients should be advised not to take any medications more than three days a week.
- It is critical that the patient take the medication as soon as possible after the onset of the headache. The longer the delay, the less effective the treatment will be. This needs to be clearly communicated to the patient, the family and the school.

**Preventive Medical Therapy for Frequent Migraines**

For patients who suffer from migraines at least once a week or who have migraines that last for long periods of time, preventive therapy may be indicated. We also recommend that these patients be referred to the Headache Clinic at Nationwide Children’s.

- **Topiramate** (15-100 mg/day) is approved by the FDA for migraine prevention in teens.
- **Amitriptyline** (10-50 mg/day), though off-label, is another commonly prescribed migraine medication.
- **Cyproheptadine 2 mg/5 mL syrup** (2-4 mg/day) has been used with good success in younger patients.

It is important to be aware of the side effects and contraindications of these medications and educate the patient and family prior to their use.
Headache Clinic at Nationwide Children’s Hospital

In the Headache Clinic at Nationwide Children’s Hospital, patients are evaluated by physicians and nurse practitioners with unique expertise in headache management for children and adolescents. Clinical psychologists are also available to provide expertise in biofeedback and relaxation therapy for families that are interested in these non-medication treatments. These approaches may be particularly helpful for older children and teens who suffer from other conditions, such as depression or anxiety. Clinic appointments may be made at the Nationwide Children’s main campus, or at locations surrounding Columbus in Dublin, Westerville and New Albany.

Referrals and Consultations

Online: NationwideChildrens.org/Neurology
Phone: (614) 722-6200 or (877) 722-6220  |  Fax: (614) 722-4000
Physician Direct Connect Line for 24-hour urgent physician consultations:
(614) 355-0221 or (877) 355-0221