

# Headaches

Hilliard Pediatrics, Inc. - Dr. Tim Teller, MD

## Introduction

Headaches are common during childhood. Children as young as 2 or 3 years of age may have head pain related to headaches. Headaches may occur because of many things: hunger, tiredness, illness, allergies, injuries, stress, medications, and foods. Sometimes the cause of a headache is clear and at other times it is hard to determine why a headache happened. Most headaches, even chronic or recurrent ones, do not represent anything seriously wrong and will resolve with some time and treatment.

## Different Causes of Headaches

- **Stress** headaches occur around the time of stress and strain. Even young children can have stress that causes a headache. These headaches seem worse around the time of stress and will often get better or less frequent as the stress gets better. Common examples would be head pain around the start of the school year or when the family is moving or is otherwise having some stress.
- Headaches from **hunger** often occur when a child's not eaten recently and resolve once they have had a healthy meal or snack. Sometimes the trigger for these headaches is only figured out after the child feels better after eating. It is not possible to always prevent these headaches, but over time some children are prone to these and paying attention to not letting them get over-hungry will prevent some of these. If your child is prone to these headaches, regularly getting some protein in their snacks and meals is helpful – cheese, peanut butter, meats. Our blood sugar tends to go lower soon after we eat “carbs” (carbohydrates) such as dry cereal, bread, crackers. Adding more protein into the diet helps prevent this from happening.
- Headaches from **tiredness** are a lot like those from hunger. You cannot always prevent these, of course. Not getting enough sleep contributes to other headaches being worse, also. Often getting some sleep over night or with a nap helps relieve these headaches. Children and teens who are chronically getting headaches due to not getting enough sleep will need to make some adjustments to their schedule to ensure they get more sleep on a regular basis.
- Many **illnesses** cause headaches. Strep throat, sinus infections, and influenza (“the flu”) are common illnesses that often cause a headache. The headaches often are worse as the illness begins and improves gradually as you start getting better. **Meningitis** is a potentially life-threatening illness that is almost always associated with a severe headache. The headache often would be the “worst headache someone has ever had”. The other symptoms that cause us to be concerned with meningitis are fever, lethargy, and a stiff neck that is very painful to move. Often someone is so sick with meningitis that they are not telling us that their neck hurts. Instead they are crying or whimpering with pain when we move them or their neck. Someone with meningitis does not perk-up when their temperature is down. Meningitis is a medical emergency and someone that may have meningitis needs to be evaluated in the emergency room immediately.

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- **Allergies** often cause headaches. The runny and congested nose cause pressure that make a headache likely. Treating the allergies often reduces the headache pain. With a sinus infection, there will be thick, discolored nasal drainage (yellow or green). Allergies often cause an itchy nose and a sinus infection does not. Sinus pain is often at the area around the eyes, nose, cheeks, and forehead.
- It is common to have headache pain after a **head injury**. The pain may last a short time and require only a dose or two of pain reducer or be a persistent issue for a few weeks if a concussion happened. We want to evaluate someone who has persistent head pain that lasts longer than a few days after a head injury. We are concerned for a concussion if after a head injury someone loses consciousness, vomits more than once or twice, or is lethargic afterwards. Anyone with these symptoms after a head injury needs to be evaluated promptly at the emergency room.
- **Medications** can cause headaches. Cold medications with antihistamines or decongestants, medications with caffeine, nasal sprays for allergies, medications for ADHD, birth control pills, and other pills can cause headaches. It can take some “detective work” on a family’s part to figure out the medicine is causing the headache. If headaches are more common while taking a medicine, changing medicines may be necessary. Sometimes the headaches are not too bothersome and the medication can be continued.
- **Foods** can cause headaches. Sometimes it is any amount of the food and sometimes it takes eating more of it than you might usually before a headache would be triggered off. The foods that most commonly cause headaches: chocolate, caffeine-containing foods and drinks, cheeses, fresh-baked breads, and preservatives in foods (such as MSG in some Asian food) can all cause headaches. Just like with the medications above, sometimes it takes a while to figure out the trigger for the headaches. As an example, some children that have chocolate trigger their headaches can eat a small amount without having a headache. So it may take some trial and error to figure out how much is okay to eat without having the headache come on.

## Different Types of Headaches

- **Migraine** headaches can start at a young age. We have had children as young as 3 years of age have a migraine. These headaches will typically feel like a pounding in the head, will often cause upset stomach (nausea) and vomiting, may have changes in a child’s vision (flashing lights, lights hurting the eyes, decreased vision in one eye), and sensitivity to loud noises. The pounding head pain is often on one side or the other of the head. Migraines often improve with sleep. Migraines can run in families, but someone with migraines may have no family history of migraines.
- **Medication withdrawal headaches** occur when someone has headaches when *not* taking ibuprofen or acetaminophen after regularly taking the medications. These are also called “rebound headaches”. This can happen when the medications are used daily, once or more every day, for days or weeks at a time. The only way to be sure if this is happening is to go a number of days without any medication. If the headache pain gets better over a few days without treatment, avoiding daily use of the medication will be helpful

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## Treatment for Headaches

For brief head pain that does not slow your child down or keep them from being active, it is not necessary to treat the headache. Generally, a mild headache will pass without any treatment over a short time.

For all kinds of headaches that need medicine, we recommend **ibuprofen** (Motrin<sup>®</sup>, Advil<sup>®</sup>, and generics) or **acetaminophen** (Tylenol<sup>®</sup> and generics). These medications are often very helpful for children, even with more severe headaches. The usual doses on the package are appropriate for headache pain. The doses are on the package for children 24 pounds and above. Another place to find dosing information is our [www.hilliardpeds.com](http://www.hilliardpeds.com) website under “Fever” or “Over the Counter Medication Dosing”. Just as you would with treating a fever, the ibuprofen and acetaminophen can be alternated every 3 hours. For example, if you gave Motrin<sup>®</sup> at noon and the headache is still there 3 hours later, Tylenol<sup>®</sup> can be given.

Children with **migraine headaches** often respond to **ibuprofen** or **acetaminophen** at a young age, even if an adult with the same symptoms would require a powerful prescription medication. Prescription medications for migraine headaches are available for **11 year olds** and above. If taking ibuprofen or acetaminophen and rest helps someone with migraines, we would generally continue those treatments. Taking these medications more than 3-4 times a week for headache may cause “rebound headaches” or medication withdrawal headaches. Please call our office during routine hours to discuss what to do if your child is routinely taking these over the counter medications for headaches.

The prescription strength medication that has been approved for 11 years of age and above is **Imitrex<sup>®</sup>**(sumatriptan), which has been available for adults since the early 1990s. This medication has the same side effects as all of the prescription migraine medications: drowsiness, dizziness, tingling, sweating and flushing, and chest or jaw discomfort. The tricky thing is that these can also be caused by the migraine itself. But for someone with severe headache pain, nausea, or vomiting from a migraine, the medication can provide some significant relief. Do not take the Imitrex and expect your child to be up and around. You should expect your child to rest or sleep. A typical recovery from a migraine might be a few hours or overnight. It can be a tough decision whether to take the medication if your child is not feeling well with a headache but has something important they wanted to do that day. I would recommend deciding by how down-and-out they feel with the headache.

Although they are used less often with children with migraine headaches than Imitrex<sup>®</sup>, two other medications that are also used in adults have been studied in and used with children: Zomig<sup>®</sup> and Maxalt<sup>®</sup>. Both of them are available as tablets and fast-melt tablets. We will discuss with you whether one of these is a good option for your child.

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Children with migraines often are flushed and hot when they have a headache. Even if they are laying down in a quiet, dark room, they may feel more comfortable with a small cool, damp (run it under cold water and then wring out some of the water) towel across the forehead and eyes. If your child has vomited when they have a headache, keep a plastic bucket or trash can nearby. Sometimes the vomiting is every 10-30 minutes in waves over a couple hours. It is not uncommon for a migraine headache to improve after a few episodes of vomiting. Do not be surprised if your child vomits a few times, sleeps off the headache, and wakes up feeling better.

## Imitrex® Dosing

Imitrex® (sumatriptan) comes as both a tablet (that must be swallowed) and a nose spray. The tablet strength (for pre-teens and teens) is 25mg or 50mg. The nose spray strength is 5mg or 25mg. The tablet dosing is one tablet at the start of the headache. The tablet can be repeated every 2 hours as needed if the headache pain continues or has returned. The maximum dose of the tablet is 200mg in 24 hours. The nose spray is sprayed into one nostril (it does not matter which nostril) at the start of the headache. The spray can be repeated every 2 hours if the headache pain continues or has returned. The maximum dose of the nose spray is 40mg in 24 hours. The nose spray is a nice option for headache sufferers who cannot swallow a pill or become so nauseous or vomit with their headaches. Imitrex® can be taken at the same time as ibuprofen or acetaminophen.

## Zomig® Dosing

Zomig® (zolmitriptan) comes as a tablet and a fast-melt tablet (orange flavored). Both come as either 2.5 or 5 mg. One tablet is taken at the start of the headache. The dose can be repeated in 2 hours if the headache pain continues or has returned. The maximum dose is 10 mg. in one day. Side effects are similar to Imitrex® (see above).

## Maxalt® Dosing

Maxalt® (rizatriptan) comes as a tablet and a fast-melt tablet (peppermint flavored). Both come as either 5 or 10 mg. One tablet is taken at the start of the headache. The dose can be repeated in 2 hours if the headache pain continues or has returned. The maximum dose is 30 mg. in one day. Side effects are similar to Imitrex® (see above).

## Prevention

Children who have headaches regularly often have fewer headaches and less severe headaches when they take a **multivitamin** every day, drink more **water**, and **exercise** regularly (for at least 20-30 minutes 3 times a week). Adding an extra 16-24 ounces of water a day can really help. Whatever you may have found that triggers the headaches should be avoided as best as you can.

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**Magnesium citrate** is a mineral that has been shown to be effective at preventing migraine headaches. It does not help everyone, but is fairly inexpensive and worth a try if the headaches are more than a couple of times a month. It can help within days. The only common side effect is diarrhea and does not bother some patients. We start with 250mg once a day. If after a week there is no significant diarrhea, we increase the dose to 500mg. If it is helping and diarrhea or stomach cramping is not an issue, the dose can be continued.

Children with migraine or other severe headaches sometimes need to take a preventative medicine to reduce the number of and the severity of the headaches. We often consider a preventative medication if the headaches are severe enough to change someone's routine (missed school or other activities) and occurring more than two or three times a month. The most common medicine used is a medication called **cyproheptadine (Periactin®)**. It commonly works well, making the migraines less common and less severe. The medication comes as a syrup or a tablet. The medication is most commonly given once in the evening for a week then a dose at breakfast is added. Thereafter, the dose is given regularly twice a day. The most common side effects are drowsiness and weight gain. The usual treatments for an active headache are fine if your child is taking cyproheptadine to prevent the headaches. Two other medicines that we use for prevention of migraines are **amitryptiline (Elavil®)** and **propranolol (Inderal®)**.

One herbal supplement that has been scientifically tested is **butterbur**. A purified form without PAs (pyrrolizidine alkaloids) and 8mg total petasin called **Petadolex®** is the one I would recommend over alternatives. Side effects are considered minimal and include belching, itchy eyes, diarrhea, and headache. Butterbur should not be taken by those with ragweed allergy or a history of liver problems. For migraine prevention, the starting dose is 50mg capsule twice a day. The dose can be increased to 75mg twice a day if needed. On average, there were less headaches and less severe headaches, a decrease by about half. It has studied in children down to 6 years of age with success. If your child has migraine headaches, discuss with your pediatrician whether this may be something to try.

## When Does My Child Need a CT scan or MRI for Their Headaches?

Tumors, cysts, increased fluid around the brain, or blood vessel issues can cause headaches in children. Thankfully, these very rarely occur and are almost never cause just headaches. They cause weakness on one side, abnormal reflexes, abnormal eye movements, changes on eye exam, headaches that occur with standing, and other changes. These issues can be diagnosed with a CT scan or MRI. Both tests are expensive and the CT scan exposes your child to radiation. Common reasons we will order a CT scan or MRI: (1). Sudden severe headache, (2). Headaches after head injury with vomiting or that are worsening, (3). Headaches with neurologic physical findings (weakness, abnormal reflexes, etc.), (4). Seizure with headaches, and (5). Sudden change in headache pattern.

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## The "What to do When" List

- If the pain of a headache is **bothering your child** => offer a dose of acetaminophen (Tylenol®) or ibuprofen (Motrin® or Advil®). If the headache pain is either not better or got better but returns, you may alternate the two medications every 3 hours. That means that if you gave ibuprofen and there is pain 3 hours later, you can give a dose of acetaminophen (or if you gave acetaminophen, you can give ibuprofen 3 hours later). The medications can be alternated every 3 hours (ibuprofen => acetaminophen => ibuprofen => acetaminophen).
- If the headache pain is **severe** AND there is **neck stiffness** or **pain, fever,** or **lethargy** => your child needs to be seen right away (it is an emergency) at Nationwide Children's Hospital Emergency Room.
- If you suspect the headaches are a migraine => offer a dose of acetaminophen (Tylenol®) or ibuprofen (Motrin® or Advil®), have your child rest in a quiet, dark room, and offer clear liquids (water, Gatorade®, Sprite®, etc.).
- If your child has a history of migraines and they have a prescription medication => it is fine to offer acetaminophen or ibuprofen for the head pain. If the pain is worse, there is worsening nausea or vomiting, or your child's migraines often progress to a more severe headache where they need the prescription medication => offer the prescription medication. Some headaches respond to the first dose while others will need multiple doses (according to the medications schedule).
- If your child has not had good success with a prescription medication => call during routine hours to discuss other medication options.
- If your child is having headaches that are disrupting their normal routine (school, sleep, eating, athletics or playtime, etc.) on a regular basis => call our office to make an appointment to discuss your child's headaches. We will examine your child, discuss possible triggers for the headaches based on their history, and discuss treatments. Some children do benefit from seeing the Pediatric Neurologist at Nationwide Children's Hospital. The specialist requires a specific referral from our office. Please be aware it is not unusual for there to be a long wait to get in to see the Neurologist.