

# TREATMENT OF MIGRAINE HEADACHE IN CHILDREN AND ADOLESCENTS

Migraine headaches, or “sick headaches,” are recurring episodes of intense, pounding, nauseating head pain. The pain lasts for several hours to up to three days.

Migraine headaches are common in children and adolescents. Three percent of preschool children, four to 11 percent of elementary school children, and up to 23 percent of teenagers have migraines. As children reach their teenage years, the number of headaches may increase.

Lots of things can cause headache in children. So it is important to see your doctor to determine the correct diagnosis. Headaches in children can occur for several reasons. For example headaches can be caused by:

- Fever due to cold or flu
- Stress, anxiety, or depression
- Ingredients in food
- Other health conditions, such as high blood pressure
- Head injury
- Environmental causes—such as weather changes
- Inherited headache disorders—such as migraine

Neurologists from the American Academy of Neurology (AAN) and the Child Neurology Society (CNS), who specialize in diseases of the brain and central nervous system, believe you should know about current treatment options for migraines in children and teens. The experts looked at all of the evidence for using drug therapies to treat migraine headache in children. Behavioral treatments were not reviewed.

## What are symptoms of migraine in children and teens?

The range of symptoms can make it hard to diagnose migraines. Occasionally children start getting migraines before they can talk. They may not be able to describe their symptoms. They may cry, vomit, and want to go to sleep in a dark, quiet room.

Older children and teenagers will describe episodes of intense, throbbing or pulsing headache in the front or sides of the head. They may also have nausea or vomiting and extreme light or sound sensitivity. Their vision may be blurred. Many children with migraine will have some but not all of these symptoms.

## How will the doctor diagnose my child?

Your child should see a doctor who specializes in treating children and teens with migraines. The doctor will examine your child. He or she will take a health history and do a neurological exam. This exam will test your child’s vision, hearing, balance, coordination, and reflexes.

In most cases, no further diagnostic tests are needed. Your doctor may decide to order a computerized tomography (CT) or magnetic resonance image (MRI) of the head. CT scans use X-rays to take pictures. MRI makes detailed images of body tissues without the use of X-rays.

## What treatments work for children with migraines?

Treatment will differ from child to child. Your child may need several therapies to manage the migraines. This may take time. The goals of treating migraines are to:

- Treat headaches quickly
- Restore ability to function
- Reduce the use of a second or third drug
- Promote self-care and reduce use of other medical providers
- Be cost-effective
- Have few or no side effects

Drug treatments for migraine headaches include:

*Drugs that quickly ease mild to moderate headaches—without a prescription*

These treatments include pain relievers such as ibuprofen and acetaminophen. You can buy these drugs without a doctor's order. Research shows that these two treatments are safe and effective. Doctors and parents should consider these treatments for the acute relief of headache in children. These drugs should not be taken more than three days in a week.

*Drugs to stop moderate to severe headaches—with a prescription*

The experts looked at studies for prescription drugs that stop severe headaches. Many studies examine the treatment of migraine in adults, but the experts found a lack of similar studies for children and adolescents.

Among the drugs known as *triptans*, only nasal sumatriptan spray was studied and found to be effective. However, that study only involved adolescents over 12 years old. This drug is the most helpful if taken early, within 30 minutes of the onset of pain. It gave pain relief within two hours in most patients. Side effects include nausea, dizziness, flushing, a bad taste in the mouth, and muscle weakness.

There were not enough data available to make recommendations for the injection form of sumatriptan. There are no data supporting the use of any of the oral triptan drugs in children or teens.

*Drugs to prevent migraine headaches—with a prescription*

The goal in preventing migraines is to:

- Reduce the number, severity, and duration of migraines
- Improve response to treatments
- Reduce disability and improve the patient's quality of life

The experts reviewed the research for other types of drug therapies. These include calcium channel blockers, anti-depressants, and anticonvulsants. A doctor's prescription is needed for all of these drugs.

The experts found that a channel blocker, called *flunarizine*, may be the most effective treatment and can be an option for preventive therapy. As of January 2005, this medicine was not available in the US. Other calcium channel blocker therapies did not prove to be successful. They are not recommended as preventive treatment of migraine headache in children and teens.

Several other medicines, including amitriptyline, cyproheptadine, topiramate, valproic acid, and levetiracetam, show promise in adult patients, but do not have proven effectiveness in children. Due to the lack of studies in children, the experts could not make preventive treatment suggestions for medications called anti-depressants or anticonvulsants in childhood migraine.

The panel of experts found that more studies need to be done to find the best, most effective medicine to treat migraine in children. Drugs shown to be effective in adults may not have been sufficiently studied in children. This does not mean that these drugs are not a good choice for certain children and adolescents. The use of these medicines must be based upon the clinical judgment of a well-trained, experienced physician.

## Talk to your primary care doctor or a child neurologist

Together you and your child's healthcare provider can choose the treatments that will work best for your child. A child neurologist can provide more information and resources to help patients and caregivers make the best treatment choices.

As with all medications, read labels carefully. Some products come in infant, child, and adult strengths. Use only the dosages recommended for children. Ask your doctor or pharmacist about the possible side effects of any medication.

This is an evidence-based educational service of the American Academy of Neurology. It is designed to provide members with evidence-based guideline recommendations to assist with decision-making in patient care. It is based on an assessment of current scientific and clinical information, and is not intended to exclude any reasonable alternative methodologies. The AAN recognizes that specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on the circumstances involved. Physicians are encouraged to carefully review the full AAN guidelines so they understand all recommendations associated with care of these patients.



1000 West County Road E • Suite 290 • St. Paul, MN 55126  
[www.childneurology society.org](http://www.childneurology society.org)  
(651) 486-9447



1080 Montreal Avenue • St. Paul, MN 55116  
[www.aan.com](http://www.aan.com) • [www.thebrainmatters.org](http://www.thebrainmatters.org)  
(651) 695-1940