

Practice Guideline Update:

# Acute and Preventive Treatment of Migraine in Children and Adolescents

## Summary for Patients and Their Families



Experts from the American Academy of Neurology, or AAN, and the American Headache Society carefully reviewed the available evidence about the effectiveness of acute and preventive treatments for migraine in children and adolescents. The following summary highlights what their findings mean for you.

### What is the key message for me?

Children and adolescents with headache should have a diagnostic evaluation with a neurologist or headache medicine specialist. The evaluation should include a careful medical history review and general physical and neurologic exams to diagnose migraine and rule out other causes. During the evaluation, children and families should be taught how to treat and prevent migraine.

There is good research evidence to support treatments for migraine-related pain in children and adolescents. However, medications to prevent migraine attacks from occurring do not have a lot of research to support their use, and this needs to be carefully considered by patients, their families, and clinicians.

### What is Migraine?

Migraine is a brain disease that is marked by episodes of attacks of headaches and other symptoms. The pain of a *migraine* attack is often described as a medium to severe pounding or throbbing pain in the head. However, it is much more than that. Clinicians diagnose migraine based on criteria developed by the International Headache Society. These include:


- How bad the pain is (moderate to severe)
- How long it lasts (two to 72 hours if not treated with medication)
- Whether a person has had at least 5 attacks
- Whether it comes along with other symptoms, like nausea and/or vomiting and sensitivity to light and sound


Migraine is common in children and adolescents. It can disrupt life activities, such as participation in home, school, and social functions, and can have a negative effect on quality of life.




#### Key to Evidence Levels

After the experts review all of the published research studies, they describe the strength of the evidence as follows:

 **Strong evidence** = Future studies very unlikely to change the conclusion

 **Low evidence** = Future studies likely to change the conclusion


 **Moderate evidence** = Future studies unlikely to change the conclusion


 **Very low evidence** = Future studies very likely to change the conclusion

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### What Does the Research Say?


#### Acute Treatment

 Acute treatment focuses on relieving the pain of a migraine attack and symptoms when they occur. There is evidence that ibuprofen, acetaminophen (both in young children and adolescents), and some of the drugs within a group called triptans (mainly in adolescents) can help relieve this pain. However, the levels of evidence vary from **very low** to **strong** for all of these drugs.

 There is **strong evidence** that combination sumatriptan/naproxen oral tablets and zolmitriptan nasal spray are effective at stopping headache pain in adolescents within two hours. No acute treatments have been found to be effective for nausea or vomiting related to migraine, though some triptans are effective for relieving sensitivity to light and sound.

#### Preventive Treatment

 Preventive treatment focuses on keeping migraine pain and related symptoms from happening in the first place. The level of evidence to determine if the medications divalproex, onabotulinumtoxinA, amitriptyline, nimodipine, and flunarizine are effective at preventing migraine in children and adolescents is **very low**.

 There is **moderate** level evidence that children with migraine who receive propranolol, topiramate, or cinnarizine<sup>1</sup> may have fewer headaches. There is **moderate evidence** that children and adolescents with chronic migraine (more than 15 headache days per month) who receive the drug amitriptyline and a type of therapy called cognitive behavioral therapy are more likely than those receiving amitriptyline and simple education about headache to have fewer headaches.

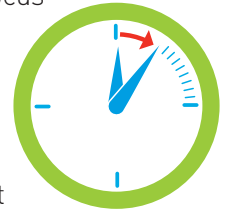


### What Should I Know About the Recommendations?

These guidelines give clinicians recommendations for patient care. The following section summarizes the focus of these recommendations.

**Recommendations for the acute treatment** of migraine attacks in children and adolescents focus on the importance of:

- Treating attacks early
- Choosing the right form of medication (such as oral tablets or nasal spray) that is best to treat the individual attack





**Recommendations for the prevention** of migraine in children and adolescents include:

- Counseling patients and their families on lifestyle and behavioral factors that can have an effect on how often headaches occur
- Screening for mood and anxiety disorders because of increased risk of headache persistence, and discussing management options for these
- Counseling patients about the risk of birth defects associated with the use of topiramate and the potential for this drug to decrease the effectiveness of oral combined hormonal contraceptives, particularly at doses higher than 200 mg daily, and informing patients about the risk of suicide associated with amitriptyline use
- Engaging patients and their families in shared decision making regarding the use of preventive treatments for migraine, including discussions about the limits of the research evidence to support their use


This guideline was endorsed by the [Child Neurology Society](#) and the [American Academy of Pediatrics](#).

1. Cinnarizine is currently not available in the United States and Canada.

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## Treatment of Migraine in Children and Adolescents —continued

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