

## Migraine in children and teenagers: Are there ways of preventing migraines without using medication?



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Migraine is fairly common in children and teenagers. By the time they reach puberty, somewhere around 1 in 10 young people have migraines every now and then. A migraine headache lasts at least four hours in adults and teenagers, and at least two hours in children. One typical symptom is a sudden, bad and pounding headache, usually on one side of the head. Migraines may also be associated with nausea and sensitivity to light or noise. Children could be pale and have to vomit, and they could also have abdominal pain (pain in the lower belly). Movement and activity usually make the headache worse. It is not known what causes migraines. You can read more about the different types of headache and how to tell if it is a migraine [here](http://www.informedhealthonline.org/index.480.en.html) (URL: <http://www.informedhealthonline.org/index.480.en.html>).

When children or teenagers have migraines, they usually need to lie down in a quiet and dark place until the pain goes away. Using a cold pack on the side of the head that is hurting could help too. You can read more about the medication that can relieve migraine symptoms in children and teenagers [here](http://www.informedhealthonline.org/index.482.en.html) (URL: <http://www.informedhealthonline.org/index.482.en.html>). However, there are several other treatments that can be used to tackle migraines, including psychological techniques, changes in sleeping habits and avoiding migraine triggers. Many people also want to know if medicines - including herbal and complementary treatments - can prevent migraines in children and teenagers. You can read about the research on that [here](http://www.informedhealthonline.org/index.483.en.html) (URL: <http://www.informedhealthonline.org/index.483.en.html>).

One of the main techniques for learning more about what is causing migraines is to keep a headache diary. A headache diary involves writing down or recording the symptoms and what happened shortly before the attack. This might be able to give people an idea of what is causing their migraine attacks. It is easy to overlook something that is causing problems, but it is also easy to jump to conclusions about something that is believed to trigger migraines. So keeping a careful record over weeks or months could increase the likelihood of finding out what is causing them.

If a child has migraines, it does not necessarily mean that they will have migraines their whole lives. However, this is more likely if migraines run in the family. If migraines first start during adolescence, it is more likely that the person will continue to have troubles with migraines in the future.

## Non-medical options for reducing migraines

It is thought that feeling tense or being stressed might trigger migraine attacks, so relaxation techniques might help to prevent or relieve them when they happen. Other treatments that are used to prevent migraines include changing certain habits - for example, diet or sleeping habits. Taking enough breaks throughout the day so that things are less hectic is another way to reduce tension.

There are different types of relaxation therapy. The most common are progressive muscle relaxation and autogenic training. Both techniques require training, either in a course or using recorded training materials to teach yourself. Progressive muscle relaxation and other techniques often teach a person to tense particular muscles and then relax them again repeatedly. This aims to bring about deep relaxation and calm both the body and mind.

Autogenic training is a relaxation technique that aims to help people achieve a kind of "self-hypnosis". They are taught to sit or lie comfortably, so that their muscles can relax. They concentrate on becoming aware of one body part after the other, and then relaxing it. The person imagines particular ways of feeling - for example, calmness, warmth or coolness. This is meant to bring about deep relaxation that aims to reduce stress and negative feelings. Using these kinds of techniques several times a day is meant to make you generally more relaxed.

The aim of biofeedback therapy is to learn to gain more control over your body. A specific type of biofeedback called thermal biofeedback is used to treat migraine. In this approach a sensor that measures temperature is attached to one of the child's fingers. Then the child tries to concentrate on making his or her hand warmer. If successful, the sensor beeps. The idea behind this approach is that the child will learn to gain control of his or her body - and to keep a headache under control when it first arises.

Different forms of cognitive behavioural therapy can help people to change the way they think about their pain and

help them cope. For example, a child might learn to get rid of worrying and negative thoughts related to their headaches in order to deal with pain better.

Although it is not known for sure what causes migraines, some research suggests that sleeping patterns might have something to do with it. Some of the changes in sleeping habits that are suggested to prevent migraines include avoiding drinking caffeinated soft drinks in the evening, and avoiding listening to loud music before going to bed. You can read more about sleep habits here (URL: <http://www.gesundheitsinformation.de/a-z-list.516.56.en.html>)

## **Research results: a combination of relaxation techniques and biofeedback or behavioural training could help**

To find out whether these kinds of techniques can really prevent migraines in children and teenagers, a group of researchers from the Netherlands looked for trials that tested the treatments described.

Researchers can test whether a treatment works with the help of a research method called a randomised controlled trial. Here volunteers agree to be randomly divided up among two groups. The people in one of the groups use a certain treatment, and those in the other group do not. At the end of the trial the groups are compared to see whether the treatment lead to an improvement. You can read more about randomised controlled trials here (URL: <http://www.gesundheitsinformation.de/evidence-based-medicine.61.en.html>)

The researchers found 19 controlled trials of non-medical techniques for trying to prevent migraines in children and teenagers. The trials included more than 800 children and teenagers between the ages of 3 and 18. In two of these trials, which looked at the influence of diet on migraines, the participants changed their diet during the trial.

The results suggest that relaxation therapy, in combination with biofeedback or cognitive behavioural therapy, could help to prevent migraines in children and teenagers. However, there has not been enough research to be sure about this. Relaxation training alone might not be enough to make a clear difference. The researchers concluded that there need to be more trials before it is possible to say how much improvement children and teenagers could expect from using these techniques.

A change in sleeping habits may also help, but there has

not been much research on this. The research on dietary changes has produced conflicting results. Two trials reported that a so-called oligoantigenic (low allergy risk) diet can improve migraine symptoms. But the data from these two trials are not enough to draw reliable conclusions about the effect of oligoantigenic diets. This kind of diet involves avoiding certain foods, such as cheese, milk, eggs or foods that contain additives. Other trials did not report any difference between a special diet and a normal one in terms of their effect on migraines. It is important to talk with your doctor before eliminating key foods from the diet of children or teenagers.

Other non-medical techniques that have been tested include acupuncture and wearing tinted glasses. However, there has not been enough research on these to be certain of whether they can help.

One of the most important elements of care for children and teenagers who have migraines is reassurance and support: although migraines can be very painful, it does not mean that something terrible is wrong, and people learn to manage their migraines. You can read more about migraines in children and teenagers here (URL: <http://www.gesundheitsinformation.de/a-z-list.583.56.en.html>)

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**Glossary**

## allergy

An allergy is the body's overly sensitive reaction to a foreign substance. The body produces antibodies just as it would if the substance were a germ, although it is not dangerous to the body. The symptoms of the allergy partly depend on the substance causing it, the allergen. People with allergies often have symptoms like running nose, watery eyes, itching, rashes, stomach and bowel problems or asthma. Typical allergens are pollen, animal hair, proteins in certain food or house dust mite excrement.

## acupuncture

Acupuncture is a complementary form of therapy used in traditional Chinese medicine. A doctor inserts thin needles at precisely defined points on the body. This is supposed to loosen what are thought to be blockages in the body or to stimulate or calm different organs.

## **Sources**

Damen L, Bruijn J, Koes BW, Berger MY et al. Prophylactic treatment of migraine in children. Part 1. A systematic review of non-pharmacological trials. *Cephalalgia* 2006; 26: 373-383. [PubMed summary (URL: <http://www.ncbi.nlm.nih.gov/pubmed/16556238?dopt=Abstract> ) ]

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You can find a list of the evidence and other scientific literature on which this information is based at **[www.informedhealthonline.org](http://www.informedhealthonline.org)**

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