



# Understanding Migraine



Amy, diagnosed in 1989,  
with her family.



## **What Is a Migraine?**

A migraine is a recurring moderate to severe headache. The pain usually occurs on one side of the head. It is typically a throbbing pain. Migraine is a biological disorder of the brain. While it is more common in women, it can affect anyone. It usually begins in childhood, adolescence, or young adulthood.

## **What Causes Migraine?**

The exact cause of migraine is unknown. It appears to be an inherited biochemical disorder in the brain. People with migraine may have a more sensitive nervous system response than others. During an attack, changes in brain activity may cause blood vessels and nerves around the brain to become irritated and inflamed.

## **What Are the Symptoms?**

Symptoms vary greatly among people with migraine but can include:

- Moderate to severe headache that lasts 4 to 72 hours, if untreated
- Throbbing pain, often on one side of the head
- Increased pain after exercise or movement
- Sensitivity to bright light, sound, and/or odors
- Nausea and/or vomiting with the headache

One in five people with migraine have a warning before the headache. This is called an aura. An aura may consist of flashing lights, temporary loss of sight, or numbness on one side of the body. In some cases, people experience the aura without an accompanying headache.

## How Is Migraine Diagnosed?

No medical test can confirm that you have migraine. You will need to provide details about your headaches and your other symptoms to your neurologist or primary care physician. Your physician will also perform a neurologic examination to check the functioning of your nervous system. Often, no further testing is needed. If your symptoms do not fit a typical pattern for migraine, your physician might order brain imaging or other tests.

## What Are the Treatment Options?

Although there is no cure, migraine is treatable with proper medical care and self-management that:

- Identifies and controls triggers that start a migraine
- Uses medications to treat migraine attacks acutely
- Uses medications and other treatments to help prevent attacks
- Encourages healthy behavior and lifestyle changes

Keeping a headache diary is a valuable tool for treating migraine. In it, you can note your pain level, symptoms, possible triggers, and treatments. Many migraine diary examples are available online. See the organizations listed in **Resources** for examples. A diary can help you work with your neurologist to track how well drugs are working.

### Did you know?

Neurologists are medical doctors who specialize in disorders of the brain and nerves. They often diagnose and treat people with migraine.

## Acute Migraine Treatments

Acute migraine treatments are used to stop an attack when it occurs and treat its symptoms. Two types of acute treatments are available: drugs that specifically stop the migraine, called abortive treatments, and nonspecific pain relievers.

Migraine-specific abortive treatments include:

- Prescription migraine drugs such as triptans (for example, sumatriptan) and ergot alkaloids (for example, dihydroergotamine [DHE])

Pain-relieving drugs include:

- Nonprescription (over-the-counter) nonsteroidal anti-inflammatory drugs, such as ibuprofen, and analgesics, such as aspirin, acetaminophen, or a drug that combines acetaminophen with aspirin and caffeine
- Prescription nonsteroidal anti-inflammatory drugs and analgesics

It is very important to take these medications as close to the start of the headache as possible. Acute treatments do not work as well several hours into a headache. Most of these acute treatments are designed to be used infrequently. If you find that you are using acute therapies more than one to two times per week, you should talk to your neurologist about alternative approaches.

Anti-nausea drugs are also frequently used to treat the nausea that accompanies migraine, and they may have some effect on the headache itself.

## Preventive Treatments

Daily preventive medications are available for people with frequent, severe, debilitating migraines. They can also help if your treatment is not working or is causing side effects. They include:

- Tricyclic antidepressants
- Beta-blockers
- Calcium channel blockers, such as verapamil
- Some anticonvulsants
- Nonsteroidal anti-inflammatory drugs
- Alternative treatments, such as vitamin B<sub>2</sub>, magnesium, and feverfew

Talk to your neurologist about when you can expect the treatment to start to work. Contact your neurologist if your treatment is not working or if you are overusing acute medications to stop migraine attacks. Overuse of acute drugs can lead to more frequent headaches.

## Cognitive and Behavioral Treatments

Research has shown that some cognitive and behavioral treatments can help prevent migraine. Such treatments include:

- Relaxation training
- Thermal biofeedback with relaxation training
- Electromyographic (EMG) biofeedback
- Cognitive-behavioral therapy (also called stress-management training)

Ask your neurologist for more information regarding cognitive and behavioral treatments.

## Living with Migraine

The following practices and tips can help reduce the impact migraine has on your life.

### Know and Avoid Migraine Triggers

Triggers vary from person to person. Some triggers are avoidable, but many are not. They can include:

- **Diet:** Missed meals, alcohol, foods with monosodium glutamate (MSG), too much caffeine or withdrawal from caffeine, and preserved meats with nitrates and nitrites
- **Sleep:** Too much or too little sleep
- **Stress:** Stress and release from stress
- **Hormones:** Changes during the menstrual cycle
- **Environmental factors:** Weather changes, bright or glaring lights, strong odors, and high altitude

### Develop a Partnership with Your Neurologist

You and your neurologist should work as a team to treat your migraine. Follow the treatment plan you develop together. See your neurologist for regular follow-up visits. Provide your neurologist with specific details about your headaches and how they affect your life.

You will have the best results by taking these steps:

- Work with your neurologist to develop a treatment plan
- If your headaches are bad enough, talk to your neurologist about prevention
- Be actively involved in your treatment, including keeping a headache diary

# For Family and Friends

Migraine can take a toll on the family too. If you are supporting a family member or friend with migraine, take care of yourself, as well. Avoid the feeling that you have to do it all yourself. Get help from family, friends, and professionals. There are many support groups for caregivers. See **Resources** for organizations to contact.

## Help Us Cure Brain Disease

### Make a Donation to Research

The American Brain Foundation supports vital research and education to discover causes, improved treatments, and cures for brain and other nervous system diseases. To learn more or to make a donation to support research, visit [www.CureBrainDisease.org](http://www.CureBrainDisease.org).

### Make Your Voice Heard

To keep research advancing toward future cures and treatments for brain disease, it is important for people affected by neurologic disorders to advocate for more research funding. Contact your members of Congress and ask them to support neurology research by increasing funding for the National Institutes of Health (NIH). Look up your Congressional representatives at [www.senate.gov](http://www.senate.gov) and [www.house.gov](http://www.house.gov). Your voice can make a difference.

### Take Part in Research

People are needed for clinical trials that can help find new treatments for neurologic disorders. Clinical trials are research studies. They help ensure that new drugs are both safe and effective. Ask your neurologist how to volunteer for a clinical trial. You can also find trials through patient organizations or the American Academy of Neurology website at [www.aan.com/view/clinicaltrials](http://www.aan.com/view/clinicaltrials).

## **Resources**

### **American Academy of Neurology**

*www.aan.com/patients*

**(800) 879-1960**

The American Academy of Neurology website for patients and caregivers offers a wealth of articles, information about events and resources, and links to support groups, clinical trial information, and more.

### **Neurology Now® magazine**

*www.neurologynow.com*

**(800) 879-1960**

Free magazine for patients and caregivers, courtesy of the American Academy of Neurology. Stories about people living with neurologic disorders, the latest information on resources and treatments, and more.

### **American Migraine Foundation**

*www.americanmigrainefoundation.org*

**(856) 423-0043**

### **Migraine Research Foundation**

*www.migraineresearchfoundation.org*

**(212) 249-5402**

### **National Headache Foundation**

*www.headaches.org*

**(888) NHF-5552 (643-5552)**



*[www.aan.com](http://www.aan.com)*

**(800) 879-1960**

The American Academy of Neurology, an association of 25,000 neurologists and neuroscience professionals, is dedicated to promoting the highest quality patient-centered neurologic care. For more information about the American Academy of Neurology, visit *[www.aan.com](http://www.aan.com)*.

*Cover photo by Sandy Puc*