Managing Migraines

Terri Burchfield, 41, of McLean, Va., says people who don’t experience migraines don’t understand the debilitating pain and disability caused by the headaches. Burchfield is one of about 30 million Americans who suffer from migraines.
Flying overseas to wine and dine clients may sound like a glamour job, but Terri Burchfield didn’t feel very glamorous when her head was throbbing and she was running to the bathroom to throw up. “I was expected to go to dinner with associates and clients,” says the 41-year-old McLean, Va., resident and former Wall Street investment banker. “I was in such pain and so nauseous. The last thing I wanted to do was eat and converse for hours with important clients. But I had no choice, I just had to get through it.”

Burchfield is one of about 30 million Americans who suffer from migraines. According to the American Council for Headache Education (ACHE), 1 in 4 U.S. households has at least one person who has migraines. And 3 out of 4 people with migraines are female.

Although there is no cure, “today, there are great new medications and a better understanding of migraines,” says Lisa Mannix, M.D., neurologist and medical director of Headache Associates in Cincinnati. “You don’t have to suffer.”

In the past 10 years, the Food and Drug Administration has approved more than 10 new drugs for migraine, more are under development, says Eric Bastings, M.D., a neurologist in the FDA’s Division of Neurology Products. Migraine medications, combined with lifestyle changes and avoiding migraine triggers, can make a tremendous difference to people who have migraines.

More Than a Headache
Migraine is a physical illness, and people who have it are called migraineurs by health care professionals. Although headache is the most recognized symptom of migraine, nausea, vomiting, distorted vision, and sensitivity to light and sound are other common symptoms that accompany the headache. The headache is typically pulsating or throbbing. The pain usually occurs on one side of the head, but it can be on both sides.

Burchfield describes one migraine that landed her in the emergency room: “I was doubled over in pain. The head pain was so severe, it was emanating throughout my entire body. I’ve never had pain that even comes close.”

A migraine attack, left untreated, can last from several hours to several days, or even longer. Attacks can strike as frequently as several times a week or as rarely as once a year.

According to the ACHE, about 1 in 5 migraineurs has warning symptoms, known as an aura, that occur 15 to 30 minutes before the headache begins. The aura may consist of flashing or shimmering lights, a graying out of vision, tingling sensations in an arm or leg, or difficulty talking.

Migraine without aura may experience vague symptoms before the headache, such as mental fuzziness, mood changes, and fatigue.

Misunderstood Migraines
“Migraines are often unrecognized and are treated as ordinary headaches,” says Robert Temple, M.D., director of the FDA’s Office of Medical Policy in the Center for Drug Evaluation and Research. Without a proper diagnosis, people with migraine may be treated with simple pain medications instead of the migraine treatments now available, Temple says.

In addition, many health providers may not be aware of the benefits of the newer preventive treatments, says Richard Lipton, M.D., professor and vice chairman of neurology at the Albert Einstein College of Medicine in New York. “Consumer education and physician education are both needed.”

There’s a lot of misinformation about migraines, and blame is often placed on the person instead of the disease, says Michael John Coleman, co-founder of Migraine Awareness Group: A National Understanding for Migraineurs (MAGNUM). “Some people are still inappropriately being told ‘it’s all in your head,’ and that they’re manifesting this behavior to get out of responsibility at work or to avoid personal or social situations. They’re being sent to psychiatrists instead of neurologists or headache specialists.”

Those who don’t get migraines don’t understand the pain and disability, says Burchfield. Like many migraineurs, she tried to hide her migraines. In college, she used bathrooms on different floors of the dormitory when she was in pain and felt nauseous, she says. “I didn’t want to be seen running out of the same bathroom all the time.”

Once she graduated and landed a job that required a lot of traveling, the migraines became more frequent and more disruptive. And sometimes, her symptoms were misinterpreted by others. “I’m sure I looked pale and sweaty and I couldn’t talk much,” she says. “I would run to the bathroom quite a bit to hide the pain and nausea. One of my associates pulled me aside one day and asked if I was bulimic.”

Even Burchfield’s family didn’t understand at first. When visiting her sister and her children out of town, Burchfield’s migraines often forced her to retreat to the quiet of a dark room. “My sister said, ‘If my kids are too loud, you can stay in a hotel.’ “

Today, Burchfield often tells people when she has a migraine, but sometimes reluctantly. The word “migraine”
The Pathways of Migraine

Migraines are characterized by recurrent, pulsating pain on one or both sides of the head and are usually accompanied by one or more symptoms.

1. Migraine originates deep within the brain
2. Electrical impulses spread to other regions of the brain
3. Changes in nerve cell activity and blood flow that may result in symptoms such as visual disturbance, numbness or tingling, and dizziness
4. Chemicals in the brain cause blood vessel dilation and inflammation of surrounding tissue
5. The inflammation spreads across nerves supplied by the trigeminal nerve, causing pain

is often misused for any bad headache, she says, "so I never know how someone is going to take it. If I had another condition, such as epilepsy, it would be different. People would believe that, but they don't always believe that you have a migraine that's incapacitating."

Causes and Triggers
Migraine used to be known as a vascular disorder, says Lipton, caused by abnormal blood vessels that affected the brain. It was thought that the blood vessels tightened (constricted), reducing blood flow to the brain, which produced the aura. Then the vessels opened (dilated), producing pain.

"The newer theory is that migraine is a neurovascular disorder," Lipton says. The perpetrator may be the brain itself—not the blood vessels, he says. Changes in the brain may cause changes in the blood flow. Also contributing to migraines are brain chemicals called neurotransmitters and channels in nerve cells that regulate the movement of minerals across them.

Migraines have a genetic link. The National Headache Foundation (NHF) estimates that 70 percent to 80 percent of migraine sufferers have a family history of migraine.

While the precise mechanisms of migraine are unclear, experts do know that people with migraines react to a variety of stimuli, called triggers. "The person inherits a predisposition for attacks and in the setting of the appropriate triggers, has an attack," says Lipton.

There's a long list of triggers that can set off an attack, and not everyone has the same triggers. Some triggers, like weather patterns, are uncontrollable,
but others, such as diet and behavior, can be modified. "Not keeping the same eating or sleeping patterns can trigger a migraine," says Seymour Diamond, M.D., co-founder and director of the Diamond Headache Clinic in Chicago. "We see them often on weekends when people oversleep and don’t have breakfast."

Certain foods or additives may be migraine triggers. Common triggers, according to the ACHIE, are hot dogs and luncheon meats containing nitrates, monosodium glutamate (MSG), chocolate, artificial sweeteners such as aspartame, and a chemical called tyramine found in sour cream, yogurt, aged cheeses, and nuts. Alcohol, particularly red wine, is a trigger for many people. Other triggers are physical exertion, fatigue, bright lights, front or glass of red wine will trigger a migraine." A combination of triggers is more likely to set off an attack.

**Diagnosis and Treatment**

There is no test to confirm a diagnosis of migraine. Obtaining a patient's full medical history and doing a physical exam including a thorough neurological evaluation can help a physician diagnose it, says Basting. In some cases, the physician may recommend magnetic resonance imaging (MRI) of the head or other procedures and tests to rule out a blood clot or brain tumor.

A combination of taking migraine medications and avoiding triggers is the main treatment for managing migraines.

There are two approaches to treating mean you’re not going to get one. When you’re unprepared, that’s when it can blindside you.”

**Drugs to Relieve Symptoms**

Symptom-relieving drugs are most effective when taken at the start of a migraine attack. "If a medicine works, the idea is to take it as early as possible," says Diamond, "to prevent other symptoms from progressing."

Over-the-counter (OTC) drugs may help relieve mild or moderate symptoms of migraine. The FDA has approved three OTC products specifically for migraine: Excedrin Migraine, Advil Migraine, and Motrin Migraine Pain. Excedrin Migraine is a combination of aspirin, acetaminophen, and caffeine. Both Advil Migraine and

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**A combination of taking migraine medications and avoiding triggers is the main treatment for managing migraines.**

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second-hand smoke, some medications and, in women, hormonal irregularities. Anxiety, stress, or relaxation after stress can also be triggers, according to the National Institute of Neurological Disorders and Stroke (NINDS).

Coleman, who has suffered from migraines since he was 6, is concerned about the emphasis some doctors place on stress as a migraine trigger, particularly those who fault the patient for not handling stress well. "It’s a myth that the inability to handle stress is the reason people get migraines," he says. "The most stressful thing about migraine is the disease itself and its impact on a person’s quality of life."

Burchfield says her migraines are not stress-related, adding that she’s pulled all-nighters to do papers or projects, with no migraine. Red wine and MSG are triggers for her. So are weather and altitude changes, making it difficult to travel. "But it’s not always predictable," she says. "Not every weather migraines with drugs: taking medication at the beginning of an attack to relieve the symptoms (acute treatment), or taking daily medication to reduce the frequency and severity of attacks (preventive treatment). The FDA has approved drugs for both of these approaches.

"Treating migraines is not a 'one-size-fits-all' condition," says Lipton. "There is a broad spectrum of treatment based on the frequency, severity, and disability of migraines." Migraines range from mild to severe, and some people with mild migraines do fine with over-the-counter medications, Lipton says. People with more disabling migraine may need more powerful, acute medications. And some migraine sufferers need preventive treatment.

No matter what drug you use, "always carry your medication with you," advises Burchfield. "Just because your migraines are unpredictable and you haven’t had one in a while doesn’t Motrin Migraine Pain contain ibuprofen and are in the class of medications called nonsteroidal anti-inflammatory drugs (NSAIDs).

It’s easy to get confused when confronted with aisles of pain relievers at the drugstore. What makes OTC migraine treatments different from other OTC pain relievers?"

"The sponsoring companies did studies and submitted to the FDA supporting data to show that their drug is effective for treating the symptoms of migraine," says Andrea Leonard-Segal, M.D., acting director of the FDA’s Division of Nonprescription Clinical Evaluation.

OTC migraine drugs may contain the same ingredients as some other OTC pain relievers, says Leonard-Segal. For example, Excedrin Migraine and Excedrin Extra Strength both contain the same amounts of aspirin, acetaminophen, and caffeine. And Advil Migraine and Motrin Migraine Pain
contain 200 mg of ibuprofen, the same amount found in some other Advil and Motrin products. But the migraine products have different dosing instructions listed on the label.

Prescription migraine drugs come in various forms: oral tablets to be swallowed with water, orally disintegrating tablets that dissolve in the mouth, nasal sprays, and injectables. The choice of drug and route of administration should be based on a discussion between the patient and physician, says Basting. “People with nausea or vomiting may find it harder to take a pill, and a nasal spray or injectable may be more appropriate for them.”

A class of drugs called triptans is generally the physician’s first-line treatment to relieve migraine symptoms, says Diamond.

Imitrex (sumatriptan) was the first triptan developed to treat migraines. First introduced as a self-injection, it is also available in tablet and nasal spray form. Six other triptans have been approved by the FDA. Triptans are thought to work by increasing the level of the neurotransmitter serotonin in the brain. Side effects include nausea, dizziness, and muscle weakness. In very rare cases, triptans have caused heart attacks and death because they can produce severe narrowing (constriction) of the coronary arteries.

Burchfield uses a triptan in pill form, but if she waits too long after the migraine symptoms start, she takes an injectable. “It usually works quickly,” she says, often relieving the symptoms within an hour. Before she took medication, the pain lasted “a minimum of four hours,” she says. Although medication rids her of pain, she feels sluggish for several hours after taking it. “I still can’t function normally. My body has no energy.”

Another class of drugs, ergot derivatives, is approved to treat migraine symptoms. Ergot derivatives are associated with more severe side effects. They may be harmful to unborn children or nursing infants, and should not be taken by pregnant or nursing women.

The triptans and ergot derivatives should not be taken by people who have a history of heart disease or uncontrolled high blood pressure.

**Drugs to Prevent Migraine**

Preventive drugs “should be considered for patients who have more than two acute migraine attacks each month or whose daily activities are seriously compromised by headaches,” says Diamond. You may also be a candidate for preventive therapy if you use pain-relieving drugs more than twice a week, or if pain-relievers aren’t working for you.

Four medications approved by the FDA to help prevent migraine are currently on the market: the beta-blockers propranolol and timolol, and the anti-convulsant drugs topiramate and divalproex sodium. Side effects of beta-blockers include fatigue, dizziness, nausea, cold hands and feet, and a slowed heart beat. Side effects of anti-convulsants include skin tingling, fatigue, dizziness, insomnia, depression, weight loss, and difficulty concentrating. Unlike the acute prescription drugs for migraine, preventive drugs may be taken safely by people with high blood pressure.

All the preventive drugs must be taken daily to be fully effective. Some people see benefits right away, Lipton says, but for most, “it takes at least a month before you can judge if it works.”

In June 2005, an NHF-sponsored study indicated that 40 percent of migraine sufferers—nearly 12 million people—could benefit from preventive therapies, yet only 1 in 5 people with migraine were using these medications. “This doesn’t mean you have to treat them with preventives,” says Lipton, the lead study researcher, but that their attacks are frequent and severe enough that “it’s worth thinking about preventive treatment.”

Lipton understands that some people don’t want to take daily medication. “It’s a lifestyle choice. But if the patient is paralyzed by the fear of the next attack, they may want to use a preventive.”

It’s important for physicians to discuss expectations with their patients when it comes to migraine medications, especially preventives, says Lipton. “Preventive medications can decrease migraine occurrence ... as well as reduce the severity and duration of migraines that do occur. But there is rarely 100 percent effectiveness.”

Yet some people have high expectations. Lipton says he’s seen patients go from having seven migraines a month to one migraine a month on a preventive drug. “When I ask them how it’s working, they say ‘It’s terrible, I had a migraine last night.’ “Physicians need to explain to patients that “if the frequency is cut by half or more, they’re doing pretty well.”

**More Is Not Better**

Taking symptom-relieving headache medicine more than a couple of days a
Data-Approved Drugs for Migraine Headaches

<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Generic Name</th>
<th>Manufacturer/Distributor</th>
<th>Indication for Adults*</th>
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<td>frovatriptan succinate</td>
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Over-the-Counter Products

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<td>Advil Migraine capsules</td>
<td>ibuprofen</td>
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<td>McNeil Consumer &amp; Specialty Pharmaceuticals</td>
<td>treatment of the pain of migraine headache</td>
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*No migraine products are currently approved by the FDA for use in children.

Leonard-Segal cautions people taking OTC migraine drugs to “be aware that these drugs contain aspirin and acetaminophen or ibuprofen, active ingredients found in other pain-relieving and fever-reducing OTC products.” People should not take additional drugs with these ingredients, or take drugs that contain other pain relievers or fever reducers, without asking a doctor or pharmacist first.

No matter what medication you choose, it’s important not to take more than the maximum number of doses recommended on the label, adds Bastings.

Non-Drug Treatment

Whether or not you take medications for migraine, making lifestyle changes and avoiding triggers can help reduce migraine frequency and symptoms.
Experts advise establishing a daily routine: eat regularly, exercise regularly, and try to get up and go to bed the same time every day.

Learn your triggers and avoid them. "Triggers are idiosyncratic," says Lipton. "What triggers a migraine in you may not trigger a migraine in me. The challenge for patients is learning their own triggers."

Physicians recommend keeping a written record, or diary, of migraine attacks, including what you ate, drank, or did 24 hours before the attack. "We don't want to make people overly compulsive about it," says Diamond, "but by keeping a diary, they may spot a particular trigger."

Diamond also advises his patients to limit themselves to two caffeine-containing liquids—such as coffee, tea, or cola drinks—per day.

"Caffeine is a two-edged sword," says Lipton, who also advises limiting caffeinated beverages. If caffeine is taken with a painkiller, it makes the painkiller more effective, he says, which is why it's an active ingredient in some migraine drugs. "The down side is that caffeine withdrawal is a potent headache trigger." Many people who drink a lot of coffee early in the morning have weekend migraines, Lipton adds. "They sleep through their first three cups of coffee and have a horrible caffeine withdrawal headache."

Coleman urges people to read food labels to make sure they're not consuming an ingredient that's a migraine trigger for them. Aspartame appears to be a trigger for you. "Avoiding diet drinks but eating diet cookies won't help if the cookies contain aspartame."

Biofeedback is another tool that may help control migraines. With this technique, clinicians use special equipment to teach patients how to monitor and control certain physical responses, such as muscle tension and heart rate. "Biofeedback is not a cure-all but is a good adjunctive," says Diamond. "It's very helpful for a great number of people."

**Women and Migraine**

Three times as many women as men get migraines, and experts believe that hormones play a big role. "In children, the prevalence of boys and girls with migraine is equal," says Mannix. "The discrepancy doesn't begin until puberty when girls start menstruating and having hormonal fluctuations."

The NHF estimates that more than half the migraines in women are menstrually related, occurring right before, during, or after a woman has her period. Some women report that these menstrual migraines are more severe and last longer than migraines they may have at other times of the month.

"There is strong evidence linking migraine with estrogen," says Mannix. Estrogen levels drop right before a woman has her period, and this fall in estrogen may trigger a migraine attack in some women. During pregnancy, when estrogen levels are high, some women have fewer and less severe migraines.

After menopause, when estrogen levels are low, some have fewer attacks and milder symptoms, but others have worse migraines. "About two-thirds of female migraineurs improve with menopause, but one-third do not," says Bastings. "Changes in estrogen level can trigger different reactions among patients, and it is not clear why this happens."

"Women should not have to tolerate menstrual migraine pain," says Mannix. "It is treatable. The most important thing is that women get diagnosed and work with their healthcare provider to get the best treatment."

Some studies have associated migraine with an increased risk of stroke, particularly in women younger than 45 who get migraine with aura. "The evidence is very solid that these women are at increased risk for stroke," says Lipton. They have three times the risk than that of women younger than 45 who do not have migraines, he adds. "That may seem like a scary statistic, but even though the relative risk triples, the absolute risk is very, very low." This means that the risk for women younger than 45 without migraine is 10 per 100,000 versus 30 per 100,000 for women younger than 45 with migraine with aura.

A woman who has migraine with aura, takes oral contraceptives, and smokes goes from a three-fold risk for stroke to a 12-fold risk, says Lipton. "I'm not saying that women with migraine should not take oral contraceptives," he adds, "but I am advising them not to smoke."

**Children and Migraine**

Migraines are most commonly experienced between the ages of 15 and 55, but children and adolescents are not immune. The American Academy of Neurology estimates that migraines occur in 3 percent of preschool children, 4 to 11 percent of elementary school children, and up to 23 percent of teenagers.

Children with migraine tend to have pain on both sides of the head, usually without aura. They often have nausea and excessive vomiting. Some children get "abdominal migraine," vomiting with no headache. According to the NINDS, researchers have found that these children usually develop headaches as they get older.

No OTC or prescription migraine products currently are approved for use in children, but physicians may recommend that children take certain drugs approved for adults, with careful monitoring.

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**For More Information**

National Institute of Neurological Disorders and Stroke  

American Council for Headache Education  
[www.achenet.org](http://www.achenet.org)  
(856) 423-0258

National Headache Foundation  
[www.headaches.org](http://www.headaches.org)  
(888) 643-5552

**MAGNUM, The National Migraine Association**  
[www.migraines.org](http://www.migraines.org)  
(703) 349-1929
13 Fentanyl skin patches provide effective relief for many who experience chronic pain, but proper use of the patch is critical.

16 Signs of foot trouble, such as swelling, redness, and unusual sensations, should not be ignored.

28 With the FDA’s approval of Exubera to treat type 1 and type 2 diabetes, many Americans who inject insulin have a new option to control their blood sugar levels.

30 Terri Burchfield is one of the 30 million Americans who experience migraines.