Migraine

Migraine is a neurological condition characterized by headaches that can be severe. It is very common, affecting about 18% of women and 8% of men. Most patients with migraine have throbbing headaches with nausea and vomiting or sensitivity to light and sound. The pain from migraine can last for a few hours up to a few days. While migraines are not a threat to your overall health, they can interfere with your quality of life.

Physiology
The exact cause of migraine is unknown, but it may result from a chemical imbalance in the brain. During a migraine attack, alterations in brain chemicals lead to local dysfunction of parts of the brain and changes within blood vessel walls. These changes lead to severe head pain and other symptoms detailed below. There is a genetic predisposition to migraine as it often runs in families.

Symptoms
The most common symptom of migraine is headache. This is usually one-sided and pounding, but can affect both sides and be steady. It is frequently associated with nausea, vomiting, light-sensitivity, and sound-sensitivity. The headache may last for several hours up to a few days. Other symptoms that may accompany migraine include motion sickness, dizziness, smell-sensitivity, poor appetite, mood changes (such as irritability or depression), and tiredness, among others.

Rarely, migraine can cause double vision, eyelid droopiness, changes in pupils size, difficulty speaking or understanding others, weakness, or numbness. These symptoms are rare and need to be investigated further by your doctor to make sure that nothing else is going on.

Migraine Aura
Migraine aura is a special kind of neurological symptom that occurs just before the headache starts in up to 30% of people with migraine. One of the most common types of aura is a visual aura. The symptoms of visual aura vary from person to person, but many see zig-zag colored lights, flashes of light, or a “shimmering” blind spot lasting for 5 to 30 minutes followed by a severe headache. These visual symptoms usually occur in both eyes, and may slowly move across the field of vision. Other types of aura include numbness or tingling on one side of the body or difficulty speaking. If an aura lasts for more than 60 minutes, then you should seek medical attention. Rarely, an aura can occur without a headache.

Migraine triggers
Various things can trigger a migraine attack, and triggers vary from person to person. Foods that can trigger migraine include cheeses (especially aged cheeses), nitrates (often found in cured meats, hot dogs, and other processed foods), chocolate, red wine, and monosodium glutamate (MSG, a flavor enhancer commonly found in Chinese food). Caffeine, artificial sweeteners, and alcohol may also trigger migraine in susceptible people. Hormonal changes are frequently associated with changes in migraine attacks. This is especially true with pregnancy, birth control pills, the menstrual cycle, or menopause. Stress, dehydration, and poor sleep are also important factors in migraine.

Diagnosing migraine
In most people, a careful history is sufficient to make the diagnosis of migraine. This is particularly true if there is a family history of migraine and if the episodes fit the pattern of a typical migraine. When someone’s pattern is atypical, especially if there are long-lasting visual symptoms, weakness, numbness, or trouble speaking then obtaining an MRI or other testing may be needed to look for other neurological problems. Very, very rarely a migraine aura will not entirely resolve, which means that a stroke has occurred. It is unusual for migraines to occur for the first time in older individuals, therefore if this occurs then your doctor may recommend an MRI or other testing.

Treating migraine
One of the most important aspects of treating migraine is to avoid migraine triggers and to live a lifestyle that helps to minimize migraines. Since each person’s migraine triggers are different than the next person’s, this
plan of treatment must be tailored to each individual. For many patients getting good sleep, maintaining adequate hydration, eating regular meals, doing regular aerobic exercise, and avoiding caffeine and alcohol can make a major positive impact on their migraines.

Migraine medication therapy is divided into acute and preventive treatments. Acute migraine treatments are medications that are taken at the onset of a migraine attack with the goal of stopping it or decreasing its severity. Anti-inflammatory medications (such as aspirin, ibuprofen, and naproxen), which are available over-the-counter, are often able to reduce the severity of the attack. The triptans are a group of medications that were designed specifically to address the brain chemical imbalance in migraine. This group includes sumatriptan (Imitrex), rizatriptan (Maxalt®), naratriptan (Amerge®), eletriptan (Relpax®), almotriptan (Axert®), frovatriptan (Frova®) and zolmitriptan (Zomig®). All of these medications are available for oral administration, and some can be taken by nasal spray, injection, or under the tongue. Other acute migraine medications include anti-nausea medications, sedatives, or, rarely, narcotic pain medications. Patients who have very frequent migraine attacks must be careful about how often they use acute medications. Most acute migraine medications can cause rebound headache (also known as medication overuse headache) when taken more than three to four times per week. Developing rebound headache can make the treatment of migraine even more difficult.

Preventive migraine medications are taken on a daily basis (or multiple times per day) in order to reduce the frequency of attacks. There are several classes of medications that can be used to prevent migraines including blood pressure medications (beta-blockers such as propranolol and atenolol or calcium channel blockers such as verapamil), antidepressant medications (tricyclic antidepressants like amitriptyline and nortriptyline), anti-seizure medications (valproic acid, topiramate). Often, a migraine preventive medication is chosen based on its side effect profile and the patient’s other medical problems. There are also several over-the-counter supplements that are effective as migraine preventives, including petasites, feverfew, riboflavin, and magnesium. Even though these medications are available over-the-counter, you should discuss them with your doctor prior to taking them.

Finding the optimal medication regimen for the treatment of migraine requires close communication between the migraine sufferer and his or her physician.

**Frequently Asked Questions**

*How could I be having a migraine when I don’t have a headache?*

While headache is the most common symptom of migraine, visual and other neurological symptoms may occur without the headache.

*Do I have to take medications for migraine?*

No. If your symptoms are not severe or occur infrequently then you may choose not to take any medications. Additionally, you may make lifestyle changes as detailed above that can help to control your migraines.