

Migraine

What is a migraine?

Migraine is a common type of headache that can affect one or both sides of the head, and may begin with visual symptoms such as lines or flashes of light. Migraine is thought to be related to changes in blood flow in the brain, and affects at least 15-20% of people, including nearly 50% of women.

Classic migraine starts with visual symptoms (often zigzag lines, colored lights or flashes of light expanding to one side of your vision over 10-30 minutes). These visual symptoms are followed by a single-sided pounding, severe headache. Along with the headache, you may have nausea, vomiting and light sensitivity.

Common migraine may cause only a headache felt on both sides of the head. Many people who thought their headaches were due to stress, tension or sinus pain may actually have this form of migraine.

Ocular Migraine

Some people experience flashes of light that look like jagged lines or “heat waves” in both eyes, often lasting 10 to 20 minutes. These types of flashes are usually caused by a spasm of blood vessels in the brain. If a headache follows the flashes, it is called a migraine headache.

However, you can experience jagged lines or heat waves and not have a headache. In this case, the light flashes are called ophthalmic (ocular) migraine, or migraine without headache. If you have these symptoms, contact your ophthalmologist.

What are symptoms of migraine?

The most common sign of migraine is headache lasting for hours. Symptoms generally include:

- Pounding pain on one side of your head (or steady pain on both sides of your head);
- Sensitivity to light and sound;
- Nausea, vomiting;
- Visual symptoms (usually in both eyes but often to one side) with some of the following characteristics:

Copyright 2008 American Academy of Ophthalmology *The Eye M.D. Association*

P.O. Box 7424, San Francisco, CA 94120-7424

www.aaao.org

- A spot of blurring that expands to one side over 10 to 30 minutes;
- An expanding border often described as zigzag lines, “shimmering” or resembling “heat waves” or “sparklers”;
- Vision loss in one eye only, involving the entire field or only the upper or lower section.

Rare symptoms include double vision, change in lid position (lid droop), or change in pupil size (both smaller and larger). In very rare cases, the visual problems associated with migraine may not entirely disappear. This may be due to a stroke associated with migraine.

Who is at risk for migraine?

People with a family history of headaches or a prior history with motion sickness may be at greater risk for migraine. Women also seem to be at greater risk for migraine, especially when experiencing hormonal changes due to pregnancy, the use of birth control pills, and menstrual periods or menopause.

What causes migraine?

While it is not clear exactly how a migraine works, it is believed that it is caused by an abnormality in an important chemical used by our brain cells called serotonin. During a migraine attack, changes in serotonin affect blood vessels in your brain, often causing the vessels to constrict or tighten. These changes in blood flow reduce the oxygen supply to the brain. If this oxygen supply is decreased long enough, it is possible to have a stroke. Fortunately, this is rare.

Certain foods may trigger a migraine attack, including aged cheese, nitrates (often found in cured meats, hot dogs and other processed foods), chocolate, red wine, monosodium glutamate (usually called MSG, a flavor enhancer frequently found in some foods), caffeine, aspartame (the artificial sweetener found in NutraSweet[®]) and alcohol.

Among women, hormonal changes are often migraine triggers. Pregnancy, use of birth control pills, and menstrual periods or menopause may cause symptoms of migraine.

People often think their migraines are due to stress. While stress probably does not cause migraine, it may affect how often attacks occur. Interestingly, however, most migraine attacks seem to happen following stress relief, often at the beginning of a weekend or vacation.

How is migraine diagnosed?

Your Eye M.D. will take a detailed headache history in order to diagnose your condition. In addition to this history, a thorough eye exam will help to eliminate the possibility of other causes for your headaches.

Your ophthalmologist may refer you to a neurologist or another specialist for further tests and evaluation.

How is migraine treated?

Treatment usually first involves avoiding factors known to cause a migraine attack, such as foods, environmental triggers such as perfume, and medications, such as birth control pills. Over-the-counter, anti-inflammatory medications (such as aspirin, ibuprofen, etc.) may reduce the severity of an acute attack. Drugs that constrict the blood vessels, including caffeine and ergotamines, are sometimes used. Also, certain prescription medications that deal directly with the presumed chemical imbalances of migraine are available (including sumatriptan, naratriptan hydrochloride, rizatriptan benzoate, and zolmitriptan).

If migraine attacks are severe or frequent enough, medication may be required on a regular basis to prevent migraine. The four most commonly used medication groups are tricyclics, beta-blockers, calcium channel blockers, and some anti-seizure medications