



*Advanced Valley Eye Associates*

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## Migraine

### What is a migraine?

Migraine is a common neurological condition occurring in at least 15 to 20 percent of the population and in up to 50 percent 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 to 30 minutes), followed by a single-sided pounding, severe headache. The headache may be associated with nausea, vomiting, and light sensitivity. Sometimes visual symptoms and even neurologic dysfunction may occur without the headache. These are called “migraine variant.”

Common migraine may cause only a headache felt on both sides of the head. This form of migraine may be responsible for the headaches that many people may have attributed to tension, stress, or sinus pain.

### What causes migraine?

While it is not clear exactly how a migraine works, it is believed that the basic cause of migraine is an abnormality in the neurotransmitter serotonin, an important chemical used by your brain cells. During a migraine attack, changes in serotonin affect blood vessels in your brain, often causing the vessel to constrict. These changes in blood flow decrease the oxygen supply to the brain. If the oxygen supply is decreased long enough, a stroke is possible. 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.

Hormonal changes are frequently associated with migraine—especially pregnancy, use of birth control pills, and menstrual periods or menopause.

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

## What are the symptoms of migraine?

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

- pounding pain on one side of your head (or steady pain on both sides)
- sensitivity to light and sound
- nausea and/or vomiting
- visual symptoms (usually in both eyes but often to one side) with some of the following characteristics:
  - 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 resolve. This may be due to a stroke associated with migraine.

## 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 medication 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 Imitrex, Amerge, Maxalt, and Zomig).

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

