

Migraines (it's not your eyes)

Migraines often result in visits to the ophthalmologists. This is because most migraines are associated, or consist of, visual symptoms, termed *visual scotoma*. These scotomas can take many different patterns but initially are simply described as flashing lights. Flashing lights are usually due to retinal problems. However the flashes due to retinal problems and migraines differ.

The retinal flashes are fast, lightning bolt-like and typically only in one eye. The flashes associated with migraines are much longer in duration, lasting from 5 to 30 minutes. They're also bilateral (both eyes) and have different patterns. The patterns are described as "cracked glass" or "kaleidoscopic", scintillating in nature. Also, the pattern begins in the center and slowly expands over the course of the migraine. The pattern also appears as a mirror image between the eyes. That is, if a c-shaped pattern in one; it is a reversed c-shape in the other eye.

The other significant difference between retinal flashes and migraine flashes are the location. The retinal flashes are mechanically induced inside the eye. Migraine flashes are occurring in the brain, in the same areas where images are being processed (the back of the brain). So migraine scotomas really have nothing to do with the eyes. You can think of the scotomas as static superimposed on the images coming from the eyes, like static on your TV.

In a "classic" migraine, the scotomas precede the headache; in ophthalmic migraines, there is no headache, just the flashing lights. Patients variably report light and sound sensitivity during a migraine.

Various triggers are reported for migraines, such as stress, certain foods and spices (MSG for instance), alcoholic drinks, and menses. With stress, the migraines occur just after the stressful period (examples, after finishing the final exam, after boarding the flight following the hustle and bustle getting ready for the vacation). If food is a trigger, it can be from the preceding night's dinner or wine.

Migraineurs usually have a family history of migraines, have them begin in the teenage years, and, if older, have a biphasic type of migraine history with the migraines recurring again in the 60s or 70s following a dip in frequency during mid life. These are generalizations, as some people have severe migraines throughout life, and some can have debilitating symptoms.

Migraines are part of a larger constellation of findings that originate as a serotonin imbalance in the brain stem. About 15% of us suffer from this problem. Symptoms other than migraine manifested from this serotonin imbalance are insomnia, panic attacks and various cognitive disorders. See the attached diagram for more details.

If your symptoms are severe, frequent or even a cause of concern, please see a neurologist for proper diagnosis and treatment. If you do not have a neurologist and wish a referral, please call our office.

The Family Tree of Serotonin Disorders

