



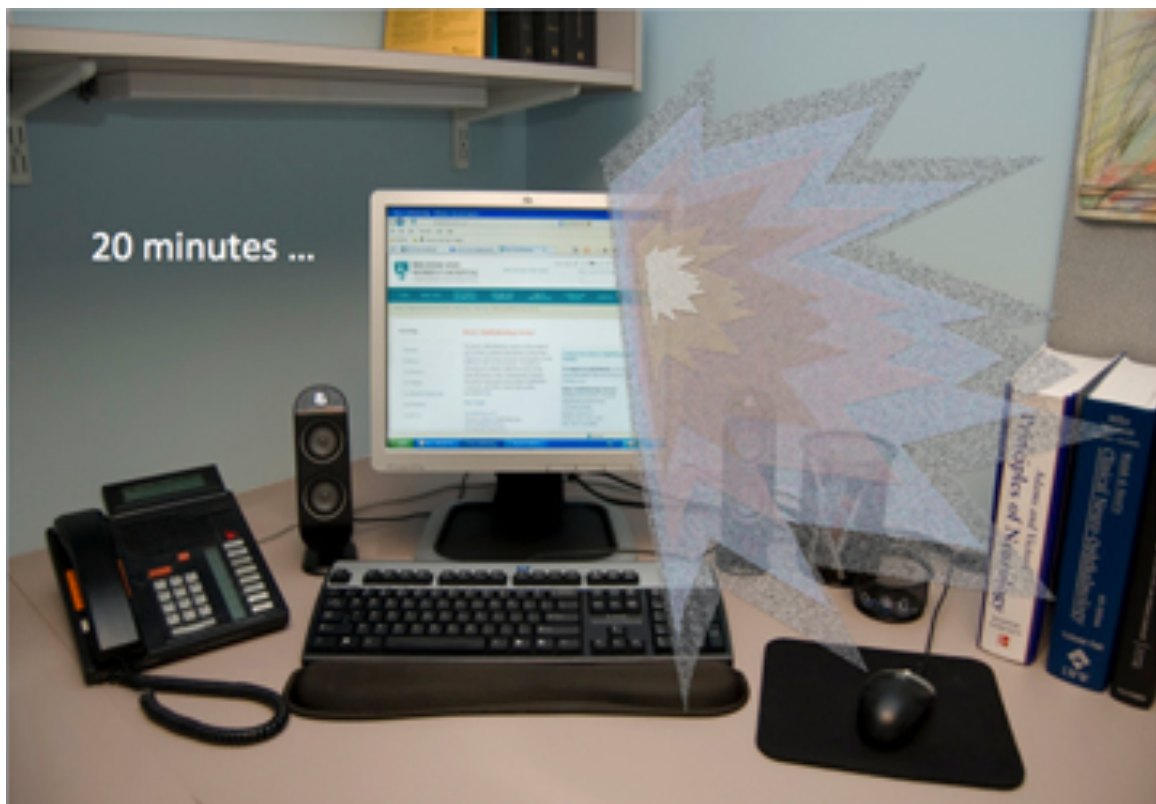
# Visual Migraine

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## A Patient's Guide

Symptoms

Diagnosis

Treatment



## Symptoms

Migraine can cause temporary visual distortions, called a 'scotoma.'

The episode resolves completely without any permanent visual changes.

## What are the symptoms of a visual migraine?

A visual migraine is a temporary visual distortion that often begins with a small sparkling, shimmering area that slowly expands outward. The growing spot often has jagged, zig-zag edges. The visual symptoms typically last approximately 20-30 minutes and then completely resolve. The area where vision is disrupted is known as a

'scotoma' and the whole episode is often referred to as an 'aura.'

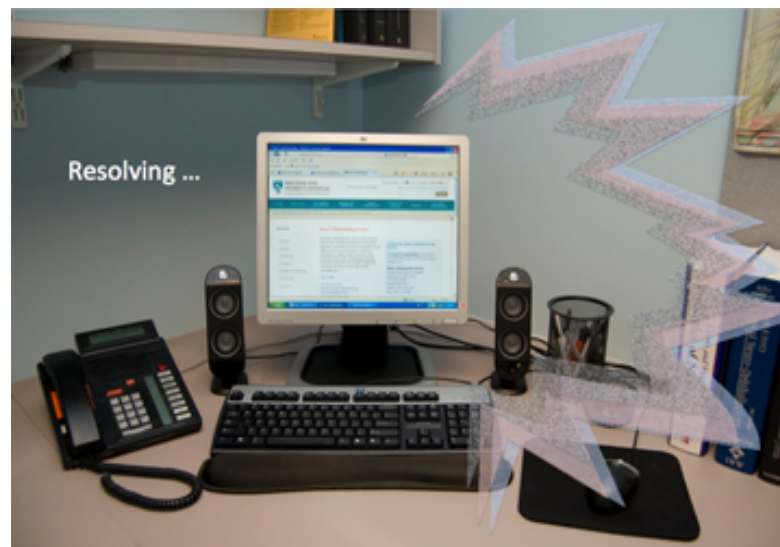
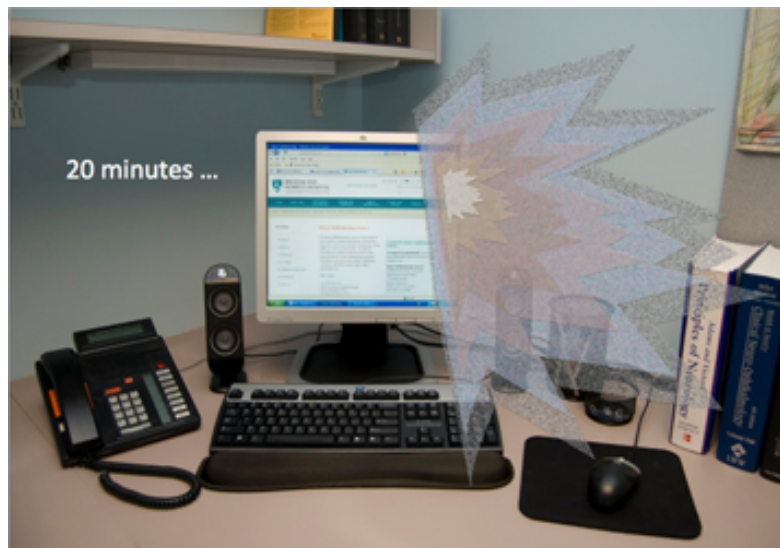
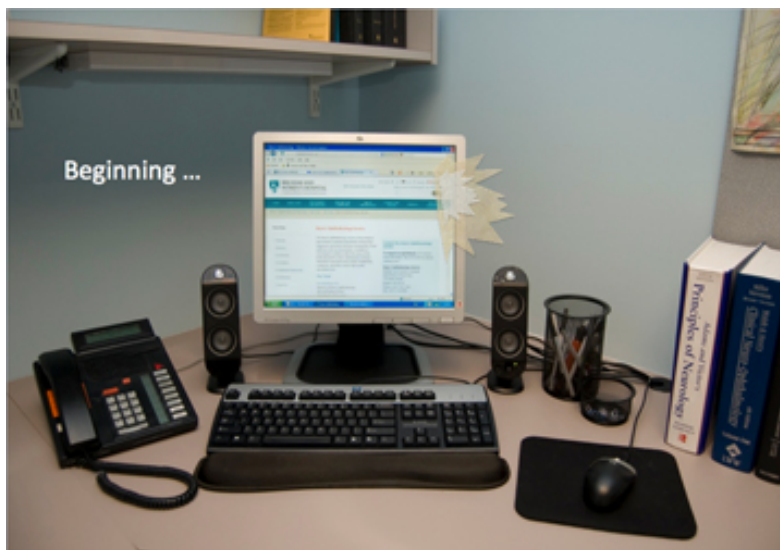
In a typical migraine, a throbbing headache quickly follows the visual symptoms. The headache lasts several hours and is accompanied by nausea and sensitivity to light and sound. The intensity of the headache may range from mild to severe.



## What are the 'red flags' that my visual symptoms are not due to migraine?

The typical symptoms of a visual migraine are 'positive,' meaning that there is something shimmering or sparkling that is disrupting the vision. Migraines are less likely to cause an area of pure visual

darkness without these 'positive' features. Temporary visual darkness typically requires additional evaluation for other conditions, including a 'mini-stroke' (a TIA, or transient ischemic attack).



## Symptoms

Common symptoms of a visual migraine:

- Shimmering and sparkling spot
- Jagged edges
- Slowly expanding
- Lasts 20 – 30 minutes



## Diagnosis

Migraine headaches are extremely common. They are more common in women, and there is frequently a family history of migraines.

Visual migraines frequently occur with only temporary visual symptoms, and no headache.

## Can I have a visual migraine without a headache?

Definitely. It is actually very common to have a visual migraine without any headache. The medical term for this is 'acephalgic migraine,' which literally means migraine symptoms

without headache. Except for the absence of a headache, the visual symptoms in acephalgic migraine are identical to the episodes that accompany a classic migraine aura.

## What causes a migraine?

Although migraines are extremely common, their exact cause remains unknown. It appears likely that the visual aura relates to a phenomenon called 'cortical spreading depression' which temporarily affects electrical impulses in the brain. The pain of a migraine headache probably relates to spasm or irritability of blood vessels in the brain, which are sensitive to pain (unlike the brain tissue itself, which does not have pain receptors). Beyond these hypotheses, however, the exact mechanism that triggers a migraine remains unknown.

It is often possible to identify certain risk factors that increase the chance of having migraines. A positive family history is very common, so the doctor will

often ask about headaches in one's parents or siblings. Overall, migraines are more common in women than in men. In addition, a person's hormonal status can affect the pattern of migraines they experience; therefore, it is natural for a woman to notice a change in headaches and other migraine symptoms in adolescence and around the time of menopause.

Many individuals can identify specific triggers for their migraines. These triggers include fatigue, skipping a meal, caffeine withdrawal, stress, and certain foods (including red wine, chocolate, or aged cheese). For many patients with isolated visual migraines, however, the events can be very infrequent and no definite trigger can be determined.



## What are the acute treatments for migraine?

An isolated visual migraine, without headache, typically does not require any acute treatment, since the visual symptoms resolve on their own fairly quickly. The first few times someone experiences a visual migraine it usually causes a lot of anxiety. Once someone has become familiar with the symptoms of a visual migraine, new episodes no longer cause the same level of anxiety.

It can be helpful to try to rest during the episode. Some patients benefit from other strategies, including eating something, having caffeine, or taking an over-the-counter medication such as acetaminophen (Tylenol®) or ibuprofen (i.e., Advil® or Motrin®).

Patients in whom the visual symptoms are accompanied by a severe headache often benefit

from additional therapies. The goal of these medications is to try to cut short (or 'abort') the headache before it becomes too severe. Some patients find naproxen (i.e., Alleve®), which is a stronger anti-inflammatory medication, to be helpful. Other patients try a class of medications known as 'triptans.'

Triptans are specially designed to work on receptors on blood vessels and brain cells in order to halt a migraine at an early stage. Although there are a number of different triptans, made by several different pharmaceutical companies, each of these is approximately equally effective. Triptans are often taken orally, but also come as injections and nasal sprays. These medicines are generally not considered safe in patients with a history of strokes, heart attacks, or other vascular diseases.



## Treatment

Pure visual migraines without headache do not typically require any treatment.

Migraines causing severe headache may be treated with rest, anti-inflammatory medications (including ibuprofen or naproxen), and a type of medicine called a 'triptan.'





## Treatment

Patients who experience frequent migraines with severe headaches may require a preventive treatment, such as:

- Stress-reduction
- Riboflavin (vitamin B<sub>2</sub>)
- Other medications (amitryptiline, gabapentin, or topiramate)

## What are the preventive treatments for migraine?

Many patients with isolated visual migraines, without severe headaches, have relatively infrequent episodes that do not require specific preventive treatments. If a patient is aware of the particular triggers that seem to bring on an episode, then those triggers can be avoided.

In patients where the pattern of migraines includes frequent, severe headaches, it is very reasonable to consider additional preventive treatments. The main goal for any of these strategies is to reduce the overall frequency and severity of the headaches. None of the preventive treatments is a 'magic bullet' that is 100% effective. For example, it would be considered successful if a preventive treatment helped reduce the number of severe headaches from 8 per month to 2-4 per month.

There are numerous medications that can be used as a preventive treatment for migraine.

One medication that is used commonly, particularly because it has no side effects, is the vitamin riboflavin (B<sub>2</sub>). Approximately 100mg of riboflavin daily is thought to improve migraine headaches (higher doses have been studied in trials but it isn't clear that the body actually absorbs those high doses). One common side effect of riboflavin is that the urine turns bright yellow.

The other medications used as preventive treatments frequently cause side effects, but starting with a low dose and then increasing very slowly is usually a helpful strategy. Some commonly tried medications include amitryptiline, gabapentin, and topiramate. Less commonly, medications such as propranolol or valproic acid are used. For some patients, botulinum injections (in the forehead and scalp) can help reduce headaches.

## How can I treat migraines without using medicine?

It is very important to remember that many of the most effective preventive treatments for migraines do not require any medications. Frequent aerobic exercise is an excellent example of an effective way to improve headaches. Other strategies may include better sleep habits, stress reduction, massage, yoga, and acupuncture.



## Where can I get more information on migraines?

For more information on visual field deficits, consider the following sources:

National Institutes of Health:

<http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001728/>

National Headache Foundation:

[http://www.headaches.org/education/Headache\\_Topic\\_Sheets/Migraine](http://www.headaches.org/education/Headache_Topic_Sheets/Migraine)

North American Neuro-Ophthalmology Society:

<http://www.nanosweb.org/i4a/pages/index.cfm?pageID=3>



## Treatment

Changes in one's lifestyle can have a major impact on the severity of migraines.

Useful strategies may include:

- Aerobic exercise
- Yoga
- Massage
- Acupuncture