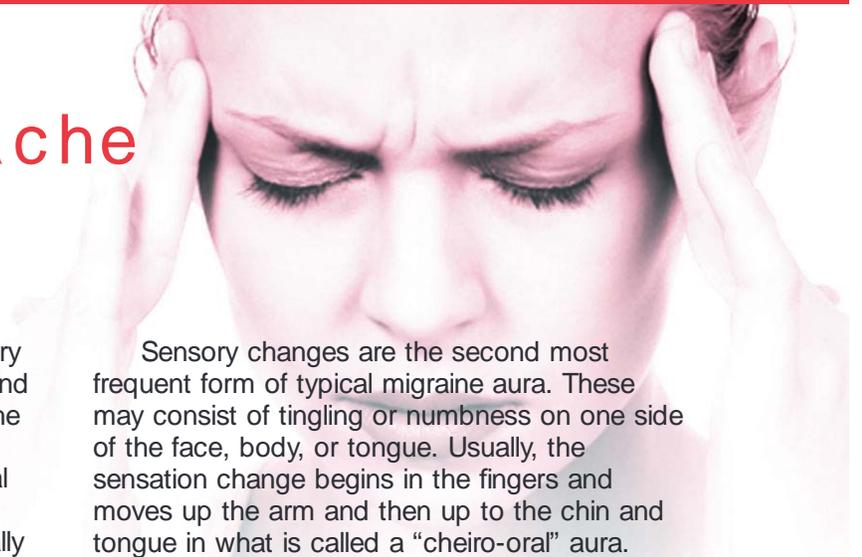


Headache Toolbox

Aura With Headache



Typical migraine aura is a short-lived sensory experience coming before or during migraine and experienced by about 1/4 of all migraineurs. The experience can be visual, sensory, or result in problems with speaking or word finding. Typical visual changes are seeing spots, zigzags or crescents, flashes of light, or losing sight partially or fully, with any one of these lasting between 5 minutes and one hour.

The symptoms, when they first occur, can be alarming. However, usually, typical migraine aura is a recurring and completely reversible phenomenon that heralds the onset of a migraine. Those affected sometimes use the aura symptoms as a signal for effective early treatment of the headache. There are treatments that can reduce the intensity or frequency of aura, and many times, the migraine itself can be improved by treating the aura.

Visual changes are the most common form of aura, occurring in more than 90% of those migraineurs with aura. There can be spots, either colored or dark, circles increasing in size, zigzags, or crescent shapes, and light or dark alterations of vision. It is not uncommon to experience tunnel-like vision such that the sides of the visual field are darkened. When people see zigzags or crescents, this is termed a “positive” visual phenomenon. When people simply lose vision and see only black or dark, this is termed a “negative” phenomenon. The zigzags often assume the shape of forts from the Middle Ages and are referred to as “zigzag fortification spectra.” The shimmering that occurs in aura when vision is obscured is referred to as a “scintillating scotoma,” where a scotoma is a blind spot in vision.

Sensory changes are the second most frequent form of typical migraine aura. These may consist of tingling or numbness on one side of the face, body, or tongue. Usually, the sensation change begins in the fingers and moves up the arm and then up to the chin and tongue in what is called a “cheiro-oral” aura.

A third form of typical aura results in problems with speech or language, such as being temporarily unable to speak, slurred speech, being unable to find the right word, or using the wrong word to express an idea.

All 3 common types of aura, and different symptoms within each type of aura, are considered typical if any one of them lasts less than an hour. Typical aura is not accompanied by actual weakness of the affected area, although sometimes migraineurs confuse extreme numbness as weakness. True weakness, such as being unable to lift an arm, is attributed to a more rare form of migraine aura, hemiplegic migraine.

Aura is caused by a firing of nerves in the brain that serves a particular function. For example, a visual aura is caused by nerves firing in the visual cortex of the brain and is associated with a big increase in blood flow to serve the activated nerves. When the firing is complete, the nerves become quiet, and the blood flow drops because the nerves are no longer firing. This period of decreased blood flow is referred to as “cortical spreading depression,” but aura is really a spreading activation, with the depression only occurring after the activation.

One common misconception is that other symptoms signaling an impending migraine represent aura. These symptoms, called

premonitory symptoms or prodrome, are indications that a migraine is probably in the offing, but they do not represent true migraine aura. Premonitory symptoms might be feeling irritable, tired, yawning, or having an unexplained change in mood. Some people will become very energetic, and others have trouble concentrating. Nausea, blurred vision, and neck symptoms are other common signs of early or impending migraine. While these symptoms do not represent aura, they can be useful warning signals to prepare for a migraine and institute possibly helpful measures such as drinking fluids, reducing stress, noise, or reducing excessive environmental stimuli.

True aura can be treated. Magnesium (400-500 mg) is one low side effect medication that can be used either at the onset of aura or used daily to prevent aura. Vitamin B2 or riboflavin (200-400 mg) per day can be used preventively, with no significant side effects. Many standard migraine preventive drugs also appear effective in reducing aura, such as topiramate and certain antidepressants. Some medications that probably effectively prevent aura may not work as well in prevention of migraine without aura, such as lamotrigine and verapamil. A different class of medications, not commonly used for migraine prevention alone, has shown promise in the prevention of aura. Memantine blocks the N-methyl-D-aspartate (NMDA) glutamate receptor in the brain and is believed to inhibit the spread of brain signaling that occurs with aura. Magnesium may also work by plugging the NMDA glutamate receptor.

The risk of stroke in women with migraine without aura is likely not increased beyond that of non-migraineurs. The risk is estimated to increase up to twice normal if a woman does have aura, but this risk remains very low overall.

Adding in estrogen-containing contraception raises the stroke risk 6-fold, and in migraineurs with aura who smoke and use estrogen containing contraceptives, the risk of stroke becomes considerable at 9 times the expected level. Use of progesterone-only contraceptives is not clearly linked to stroke.

It is strongly recommended that those who have migraine with aura as well as tobacco dependence, at any age, cease smoking. In women with aura older than age 35, particular caution is advised in using estrogen-containing contraceptives or taking hormone replacement therapy because of this additional risk. When discussing contraceptive options, women should notify their gynecologist or primary care doctor if they have migraine with aura. Anyone whose aura worsens after using hormonal therapy will need to stop it. If aura is atypical, for instance if individual visual, sensory, or speech symptoms last longer than an hour, or there is accompanying weakness, hormonal contraception containing estrogen should not be used.

Aura is a common accompaniment to migraine, occurring in about one-quarter of those with migraine. It usually follows an established pattern in any given migraineur. When recognized as typical, it can be treatable and even serve as an early warning to begin addressing the migraine before significant pain onset. With reasonable precautions, such as avoidance of smoking and judicious consideration of estrogen contraception, migraine with aura is a treatable problem seldom associated with complications.

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To find more resources, please visit the American Migraine Foundation