

Migraine And Its Link to Hypertension

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Key Points

- Migraine is a throbbing ache felt on one side of the head.
- It is often associated with nausea, vomiting and increased sensitivity to light & sound.
- Migraine and hypertension often coexist.

Types of headaches

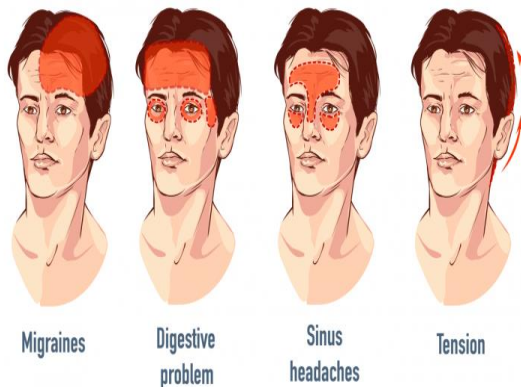


Figure 1: *Type of headaches*¹

Migraine is a disabling neurological disorder, diagnosis of which is based on clinical criteria. A shortcoming of these criteria is that they do not fully capture the heterogeneity of migraine, including the underlying genetic and neurobiological factors. This complexity has generated momentum for biomarker research to improve disease characterization and identify novel drug targets.¹

When you've got a migraine, it looks like your head is throbbing, each light is obtrusive and all you need to do is lie down in a darkish room. For a few people, a caution symptom called an aura happens earlier than or with the headache.

Causes:

A migraine headache is due to abnormal brain activity. This activity may be brought about as a result

of many things. Most medical workers believe the assault starts inside the brain and includes nerve pathways and chemicals. The modifications have an effect on blood flow with inside the brain and surrounding tissues.

Migraine is three times more common in women. Calcitonin gene related peptide (CGRP) plays a critical role in migraine pathology and causes female-specific behavioral responses upon meningeal application. These effects are likely mediated through interactions of CGRP with signaling systems specific to females. Prolactin (PRL) levels have been correlated with migraine attacks.²

Different people have different triggers that may cause migraines such as;

- Stress
- Strong odors, perfume
- Certain foods
- Caffeine withdrawal
- Changes in hormone levels during a woman's menstrual cycle or with the use of birth control pills
- Changes in sleep patterns, such as not getting enough sleep
- Drinking alcohol
- Exercise or other physical stress etc.

Symptoms:

There are two main types of migraines:

1. Migraine with aura (classic migraine)

2. Migraine without aura (common migraine)

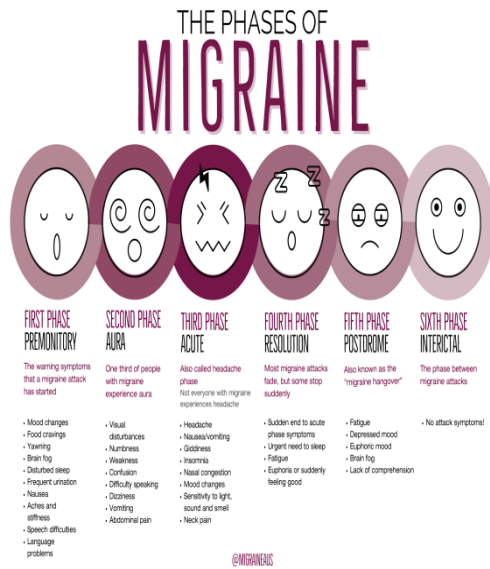


Figure 2: phases of Migraine²

An aura is a group of nervous system (neurologic) symptoms. These symptoms are considered a warning sign that a migraine is coming. Most often, the vision is affected and can include any or all of the following:

- Temporary blind spots or colored spots
- Blurred vision
- Eye pain
- Seeing stars, zigzag lines, or flashing lights
- Tunnel vision (only able to see objects close to the center of the field of view)

An aura often occurs 10 to 15 minutes before the headache, but can occur just a few minutes to 24 hours before. A headache does not always follow an aura.

The headaches usually start as a dull ache and get worse within minutes to hours

Other symptoms that may occur with the headache include:

- Chills
- Increased urination
- Fatigue

- Loss of appetite
- Nausea and vomiting
- Sensitivity to light or sound

A history of abuse is associated with greater migraine-related sensory hypersensitivity symptoms. To reduce the impact of abuse on migraine symptoms, future studies should explore mechanistic connections between abuse and migraine-associated symptoms.³

Post-drome:

After a migraine attack, you may feel drained, stressed and washed out for as much as a day. Some human beings record feeling elated. Sudden head motion may bring about the ache once more briefly.

Diagnosis:

Your provider can diagnose migraine headache through asking about your signs and symptoms and family records of migraines. A whole physical examination can be carried out to decide if your complications are because of muscle tension, sinus problems, or a brain disorder.

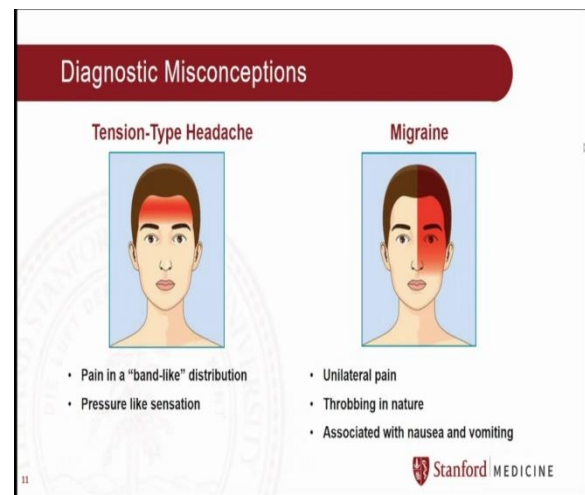


Figure 3: Diagnostic Misconceptions

There is no unique test to prove that your headache is genuinely a migraine. In maximum cases, no special tests are needed. Your provider might also additionally order a mind CT or MRI test if you have by no means had one before. The test will also be

ordered when you have unusual signs and symptoms together along with your migraine, inclusive of weakness, reminiscence problems, or lack of alertness. An EEG may be needed to rule out seizures. A lumbar puncture (spinal tap) might be done.

Treatment:

There's no cure for migraine headaches. But many drugs can treat or even prevent them. Common migraine treatments include:

- Better sleep habits, such as getting enough sleep and going to bed at the same time each night
- Managing Stress
- Antidepressants
- Blood pressure medicines, such as beta blockers
- Anti-seizure medicines
- Calcitonin gene-related peptide agents
- Atogepant is an oral, small-molecule, calcitonin gene-related peptide receptor, antagonist that is being investigated for the preventive treatment of migraine.⁴
- There is evidence of a link between migraine and GI comorbidities, including those under the DGBI classification. Many patients do not find adequate relief with oral migraine therapies, which further necessitates increased recognition of GI disorders in patients with migraine by the headache community.⁵

Hypertension:

High blood pressure (hypertension) is a common condition in which the long-term force of the blood against your artery walls is high enough that it may eventually cause health problems, such as heart disease.

Link to Migraine:

Migraine and hypertension are common conditions that often coexist. The relationship among the two is typically coincidental, however a few evidence shows

that terrible control of blood pressure may also exacerbate the frequency and severity of migraine.

Several studies reveal that hypertension is associated with chronic migraine and may induce migraine cornification. Hypertension probably amplifies the effects of migraine on the vascular wall further enhancing the endothelial dysfunction in cerebral vasculature. Consequently, monitoring of blood pressure is recommended in migraineurs showing an otherwise unexplained increase in attack frequency. Studies are needed to verify if prophylactic treatment with drugs improving endothelial function (e.g. calcium channel blockers, beta blockers, calcium inhibitors, ACE inhibitors and sartans) may selectively ameliorate the course of migraine in these patients.⁶

References:

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