

Migraine and its Link to Hypertension

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Key points

- It is a neurological disorder
- Signs and symptoms include headaches accompanied by nausea, vomiting, photophobia and phonophobia
- Migraine is linked to an increased risk of vascular problems

Migraine is the sixth most impairing condition in the world, with the highest rating among all neurological disorders.¹ The biology of migraine is complex, diverse, and unresolved in some areas. Migraine is a neurological disorder characterised by headaches of moderate to severe intensity, which are frequently accompanied by nausea, vomiting, photophobia, and phonophobia.² A migraine is felt like a throbbing pain, typically on one side of the head.

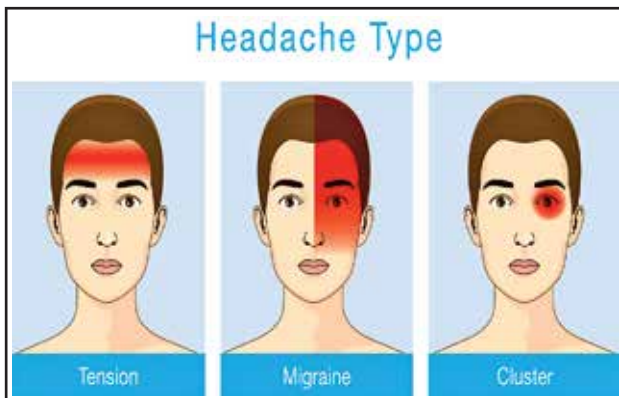


Figure 1; types of headache (Source: weilab.com)

Types

1. Migraine with aura
2. Migraine without aura

Two basic types of migraines: migraine with aura, formerly known as classical migraine, and migraine without aura, in which sensory and other neurological signs precede a migraine arrival. The second type of migraine is migraine without aura, often known as common migraine. It is the most typical. Chronic migraine, also known as high-frequency episodic migraine, is one of the subtypes, with 15 headache days per month, eight of which have migraine-like symptoms and last more than three months.³

Diagnosis

Migraine headache is primarily diagnosed clinically. A complete medical history must be taken, as well as a thorough evaluation of the central nervous system. All symptoms must be fully described by the patient. The history is critical in migraine diagnosis, and the examination's main objective is to identify any additional conditions that may aggravate a pre-existing migraine susceptibility. History taken is always sufficient for diagnosing migraine headaches if the correct questions are asked. The patient typically presents with a history of unilateral pulsatile headache that originates in the supraorbital region and progresses to the temporal area, is accompanied by nausea or vomiting, and is triggered by loud sounds or exposure to bright light. The patient always claims to have these symptoms more than twice or three times a week (if a chronic condition).⁴

Triggers

- Stress: When you're stressed, your brain releases chemicals that can cause blood vessel changes that might lead to a migraine.
- Food: Some foods and drinks, such as aged cheese, alcohol, and food additives like nitrates (in pepperoni, hot dogs, and lunch meats) and monosodium glutamate, may be responsible in some people.
- Skipping meals
- Caffeine. Getting too much or not getting as much as you're used to can cause headaches. Caffeine itself can be a treatment for acute migraine attacks.
- Changes in weather Storm fronts, changes in barometric pressure, strong winds, or changes in altitude can all trigger a migraine.
- Senses: Loud noises, bright lights, and strong smells can set off a migraine.

- Medications: Vasodilators, which widen your blood vessels, can trigger them.
- Physical activity
- Tobacco
- Drinking alcohol
- Changes to your sleep: You might get headaches when you sleep too much or not enough.
- Hormonal changes: Many women notice that they have headaches around their period, while they're pregnant, or when they're ovulating.
- Symptoms may also be tied to menopause, birth control that uses hormones, or hormone replacement therapy.

Symptoms

Some patients experience a prodromal phase that occurs hours or days before the headache, as well as a postdromal phase that occurs after the headache has been relieved.⁵

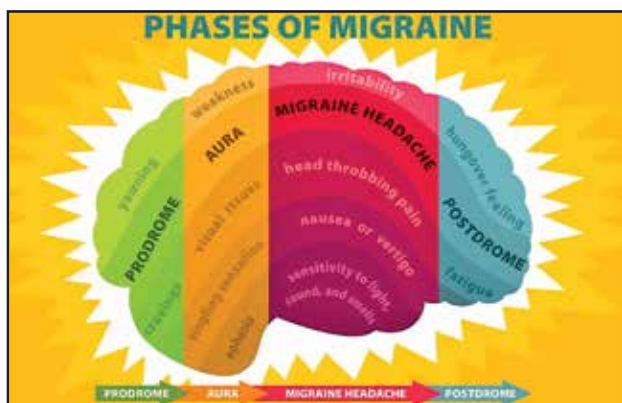


Figure 2; phases of migraine
(Source: surgicalmigraineclinic.com)

Prodromal

- Irritability
- Depressed mood or changes in mood
- Yawning
- Fatigue
- Difficulty sleeping
- Increased need to urinate
- Food cravings
- Nausea
- Sensitivity to light or sound
- Trouble concentrating
- Difficulty speaking or reading
- Neck pain or muscle stiffness
- Hyperactivity

Postdromal

- Feeling drained, tired or weary
- Aches
- Stiff neck
- Difficulties concentrating or brain fog
- Digestive issues
- Mild head pain or discomfort
- Feeling very hungry or thirsty
- Mood changes
- Feeling euphoric and full of energy

Treatment

- Using painkillers
- Acupuncture
- Calcitonin gene-related peptide (CGRP)-targeted medicines were a true game changer in migraine treatment.⁶
- Establishing a better sleep pattern
- Triptans are considered second-line agents, and there are numerous options. A combination of triptan and NSAIDs may be beneficial in more severe cases.⁷
- Antidepressants
- Divalporex sodium
- Antiepileptic medication
- Propranolol, a nonselective beta-blocker, is the most often prescribed antihypertensive medication.⁷

Hypertension

Hypertension is one of the most significant modifiable risk factor for the development of cardiovascular disease and mortality.⁸

Link to migraine

There is increasing evidence that migraine is linked to an increased risk of vascular problems. People with migraine have a higher risk of haemorrhagic stroke, transient ischemic stroke, myocardial infarction, and unstable angina than those who do not have migraine.⁹ Furthermore, several systematic reviews and meta-analyses suggest that migraine with aura, which affects roughly one-third of migraine sufferers¹⁰, may be a risk factor for ischemic stroke. There has also been evidence of a link between migraine and death from cardiovascular and cerebrovascular events.^{11, 12} Although stroke and acute coronary events continue to be a concern for clinicians, few studies have shown the risk of other significant vascular events in migraine patients, such as venous

thromboembolism, peripheral artery disease, and congestive heart failure. Furthermore, some migraine medications, such as triptans, appear to have vascular effects and should be avoided in patients at high risk of cardiovascular disease.^{13, 14}

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