

# Migraine headaches: causes, symptoms and treatments



**ASSIGN  
BUSTER**

A migraine headache(1) is a type of vascular headache. It is caused by vasodilation. In it release of chemicals from nerve fibers occurs which coil around the large arteries of brain. Sympathetic nervous system is usually activated by migraine attacks, which controls responses that cause pain and stress. The oral medicine which are taken to treat migraine headaches, their impaired absorption is a main reason for the ineffectiveness of medicines. Migraine has influenced 28 lack Americans, and among them females are suffering more frequently(17%)than males(6%). Nausea, vomiting, diarrhoea, facial pallor, cold hands and cold feet and sensitivity to light commonly are the symptoms of migraine headaches. A typical attack lasts b/w 4-72 hours. It is estimated that 20% of migraine headaches are linked with an aura(3). Some migraines are accompanied by neurological dysfunction these are some complicated migraines(4). When symptoms are clear then migraine headaches are diagnosed. Migraines normally begin in early days. It can also occur in a person beyond the age 50, advancing ages make other types of headaches. Migraine(5) is often remained under diagnosed and under treated. Migraine headache is incurable until now.

1. A migraine headache is a type of vascular headache.
2. A typical attack lasts b/w 4-72 hours.
3. Migraine attacks activate the sympathetic nervous system of the body.

## **INTRODUCTION**

Migraine headache is a type of vascular headache. It is caused by vasodilation. In it release of chemical from nerve fibers(8) occurs, which coil around the large arteries of brain. These large sized blood vessels

stretch the nerves that coil around the blood vessels and cause the nerves to release chemicals.

These chemicals cause inflammation, pain and more large size of the arteries.(9)

Which cause more severe pain. Sympathetic nervous system is usually activated by migraine attacks(10), which controls responses that cause pain and stress. Many other symptoms are also caused by this activation, for example the increased activity of sympathetic nervous system in the intestine causes nausea, vomiting and diarrhea.

The oral medicine which are taken to treat migraine headaches, their impaired absorption is a main reason for the ineffectiveness of medicines. Circulation of blood is also decreased due to increased activity of sympathetic nervous system and that leads to cold hands and feet and pallor of the skin.

The increased activity of sympathetic nervous system activity also causes the sensitivity of light and sound (11) as well as blurred visions.

Migraine has influenced 28 lack Americans, and among them females are suffering more frequently (17%) than males (6%). Anyhow migraine is largely under diagnosed and under treated till now.

## **SYMPTOMS**

Most migraine attacks are correlated with headaches.(12)

1. sometime the pain is usually in the forehead, near the eye, or at the back side of head

2. Pain is usually on one side of head and sometime it is on the both sides of head
3. The one side headache usually change from one side to another , in case of the same side headache it should alert the doctor to consider a sec. headache caused by a brain tumor.
4. It is usually increased by daily activities such as walking upstairs
5. Nausea, vomiting, diarrhae, facial pallor, cold hand and cold feet and sensitivity to light commonly are the symptoms of migraine headaches.

A migraine sufferer usually wants to sit in loneliness

A typical attack lasts b/w 4-72 hours.

The symptoms may also involve

- sleeping
- irritability(13)
- fatigue(14)
- depression(15)
- yawning(16)

## **MIGRAINE TRIGGERS**

It is a factor relating to environment or physiological conditions which lead to headaches in those persons who are prone to migraine headaches. Only a few migraine sufferers, can clearly identify these triggers. Examples include:

- Stress
- Sleep disturbances

- Fasting
- Hormones
- bright or flickering lights
- Odors,
- Cigarette smoke
- Alcohol
- Aged cheeses
- Chocolate
- Monosodium glutamate
- Nitrites
- Aspartame and caffeine

In some women, the decrease in the level of estrogen during the onset of puberty is a trigger for migraine headaches which is referred to as menstrual migraines.

### **Migraine and Female hormones**

Some women suffer from migraine headaches around the time of their menstrual cycles. And some other women suffer from migraine headaches only at the time of menstrual cycle." Menstrual migraine" is a term which is used mainly to describe migraines that occur in those women who have all of their headaches before two days and after one day of their menstrual cycles. Decreasing levels of estrogen at the onset of menses is the main cause of menstrual migraines.

## **MIGRAINE AURA**

It is estimated that 20% of migraine headaches are linked with an aura, frequently the aura causes the headaches, even though sometimes it may occur at the same time with the headache.

The most frequent auras are;

1. Flashing, bright lights in zigzag pattern, starting in the middle and moving outward,
2. A gap in the visual field which is known as a blind spot.

Some old migraine suffering patients may practice only the visual aura, without the headache. A less common aura consists of pins-and-needle sensation in the hand and on the arm and also around mouth and near nose.

Other types of auras include aural abnormalities and irregular tastes and smell.

Approximately after 24 hours of migraine attacks the sufferer may feel lack of energy and may practice a low grade headache.

Retinal or visual migraines are rare (17) types of attacks and are characterized by repetitive instances of sightlessness on one side lasting one hour that can be linked with headache.

## **SOME VARIANTS OF HEADACHE**

Some migraines are accompanied by neurological dysfunction these are some complicated migraines. The brain determines the part of the body that is affected by dysfunction, and is responsible for headache.

## **Vertebrobasilar migraines**

These are involved in the dysfunction of the lower brain that controls the automatic activities like awareness and sense of balance.

The symptoms include

1. fainting as an aura
2. giddiness (wooziness in which the environment seems to be rotating)
3. double visualization

## **Hemiplegics migraines**

These include paralysis or fault of one side of the body,

Mimicking a stroke.

The paralysis or fault is typically momentary, but from time to time it can last for many days.

## **MIGRAINE HEADACHE DIAGNOSE**

When symptoms are clear then migraine headaches are diagnosed. Migraines normally initiate in early days.(19)It can also occur in a person beyond the age 50, but as the age increases it makes other types of headaches.

In this a family history is also involved, this disease may be transferred from parents to their children genetically.

Patients who have the first headache ever, a significant change in their characteristics of headache or an connection of the headache with nervous system symptoms, like visual or hearing or sensory loss may have need of extra tests to take out the diseases other than migraine.

<https://assignbuster.com/migraine-headaches-causes-symptoms-and-treatments/>

There are some tests which are used to diagnose the headaches which include blood testing and scanning that is CT or MRI.

## **TREATMENT OF MIGRAINES**

There are two types of treatment.(20)

1. Non-medication therapies for migraine
2. Medication for migraine

### **Non-medication therapy for migraine**

The therapy can be a preventive or non medicated therapy that does not involve medication.

a – by using ice, biofeedback, and relaxing techniques headaches can be stopped.

b – sleep can be the best medicine.

c – by avoiding smoking the effect of migraine can also be minimized.

d – by avoiding convinced foods specially those which are high in thyramine like sharp cheese or those which contain sulfites (wines) or nitrates (nuts, pressed meats) migraine headache can be stopped.

Commonly, a healthy life-style with good diet, an sufficient ingestion of liquids, adequate sleep and exercise can be useful therapy. Acupuncture has been recommended as a useful therapy.



## **Medication for migraine**

Some individuals suffering from migraine generally treat themselves with over-the-counter (OTC) or non prescription pain relievers. Many types of OTC analgesics(21) or pain relievers are accessible. These are efficient for short interval of time only. When used according to informations on labels.

Two types of analgesics are:

1. Acetaminophen(22)
2. Non-steroidal anti-inflammatory drugs(NSAIDS)(23)

## **Acetaminophen**

It acts on the pain centers in the brain and reduces pain and fever. It is well tolerated by the stomach and normally is considered easier on the stomach than NSAIDS, when it is taken in large doses it can also damage kidney, and it can also effect liver.

## **NSAIDS**

There are two types of NSAIDS

1. aspirin
2. non aspirin

Ibuprofen and naproxen are the examples of non aspirin NSAIDS. Some NSAIDS are accessible by only prescription. To treat arthritis and other inflammatory conditions prescription NSAIDS are usually prescribed. The amount of active ingredient in each pill is the main difference between OTC NSAIDS and prescription NSAIDS.

The pain can be relieved by the action of NSAIDS on the inflammation that causes the pain. Although corticosteroids are valuable in inflammation but when used for long interval of time these have very toxic side effects.

Aspirin, aleve, motrin and advil all are NSAIDS and have similar effects in relieving pain and fever.

Their effect on platelets is the main difference between aspirin and non aspirin NSAIDS, platelets are the small particles in blood that cause blood clots, and aspirin inhibit the action of platelets. The non aspirin NSAIDS also inhibit the action of platelets but their action is not as long as aspirin.

## **Precautions while using OTC analgesics**

Following precautions should be observed with OTC analgesics;

1. Children and teenagers should avoid aspirin for the cure of headache because of its dangerous side effects of developing Reye's syndrome that can lead to comma or even death.
2. People who are suffering with balance disorder should not use aspirin.
3. Because of the increased risk of bleeding people who are suffering from ulcers of stomach and duodenom should not use aspirin and non aspirin NSAIDS.
4. People who are suffering with liver diseases should also not take aspirin because it may affect the kidney and liver's functions.

OTC and prescription analgesic should not be overused, because their overuse can cause development of tolerance of these analgesics means increasing ineffectiveness of the analgesics.

## **TREATMENT FOR MODERATE TO SEVERE ATTACK**

Specific migraine futile medicines are used for the treatment of moderate to severe attack because they not only relieve the headache but also terminate the headache.

Examples include Triptans and Ergot preparations.

### **Triptans**

The triptans (24) constricts the blood vessels and reduce the inflammation by attaching to the serotonin receptors which surround the blood vessels. This aborts the headache, in past it was used with the name of sumatriptan, the new form of it is zolmitriptan that are available as tablets in market.

### **Side effects of triptans**

Facial flushing, tingling of skin and a sense of tightness around chest and neck are the most common side effects of triptans. Other side effects which are not more common are drowsiness, fatigue and dizziness. The most serious side effects are heart attacks and strokes, because these can narrow arteries in brain as well as in the heart.

### **Ergots**

The effect of ergots is like triptans that terminate migraine headaches. These are in the combined form with caffeine and other pain relievers.

Ergotamine preparations (ergomar, wigraine, cafergot) and dihydroergotamine preparations (DHE45, Migranal) are the examples of ergots. Ergots constrict the blood vessels which is more dangerous for heart.

**Midrin**

It is used to terminate migraine and tension causing headaches. It is a combined product of isometheptene (a blood vessel constrictor), acetaminophen (a pain reliever), and dichloralphenazone (a mild sedative). It acts more effectively if it is used early during a headache.

**PREVENTIONS**

There are two ways to prevent migraine headache,(14)

1. By avoiding the headache causing factors
2. By preventing headaches by taking medicines

**PROPHYLACTIC MEDICATIONS FOR MIGRAINE HEADACHES**

These are medicines which are taken daily to minimize the duration of headaches. When a headache has begun then these are not taken at once.

Several types of prophylactic medications are there

1. beta blockers
2. calcium channel blocker
3. tricyclic anti depressants
4. anti serotonin agents
5. anti convulsants

The doctor should take into account the side effects of the drug, drug-drug interactions and co-existing conditions such as diabetes, heart diseases and high blood pressure while choosing prophylactic medication for a patient.

**PROPER WAY TO USE PREVENTIVE MEDICATIONS**

1. The medications should be prescribed by the doctor who is familiar with treatment.

2. Decisions about to take medicines based on their side effects
3. Propranolol is used first, but it is not provided to the individuals who have asthma or heart disease.
4. These begin at low doses and steadily increase to higher doses.

## **CONCLUSIONS**

Migraine is often remained underdiagnosed and under treated. There is no cure for migraine, there are many measures for the better life of migraine sufferers(25). Pharmacists are trying their best to invent a new drug for the cure of migraine. Individulizing treatment is essential for better results.