HEADACHE (CAUSES, DIAGNOSIS, TREATMENT, TYPES) IN MEDICINE - A REVIEW

MUHAMED MAHMOOD JAWAD¹ & FATEMA MAHMOOD JAWAD²

¹Research Scholars, Department of Medicine, Health Ministry, Iraq
²Medical Technical, Alfurat Hospital, Health Ministry, Iraq

ABSTRACT

This review study explains pain, headache, causes, types, treatment, age of patient and diagnosis. Headaches are one of the most common symptoms that can be experienced. Most people will experience a headache at some point of their lives. They can affect anyone regardless of age and gender. The World Health Organization (WHO) reports that around 47% of the world's adult population will have experienced a headache within the last year. As well as being symptoms of other conditions, headache disorders can lead to the development of other illnesses.

KEYWORDS: Head, Ache, Medline

INTRODUCTION

Tension headaches are the most common type of headache and are what we think of as normal, "everyday" headaches. They feel like a constant ache that affects both sides of the head, as though a tight band is stretched around it.

A tension headache normally won't be severe enough to prevent you doing everyday activities. They usually last for 30 minutes to several hours, but can last for several days. The exact cause is unclear, but tension headaches have been linked to things such as stress, poor posture, skipping meals and dehydration.

Tension headaches can usually be treated with ordinary painkillers such as paracetamol and ibuprofen. Lifestyle changes, such as getting regular sleep, reducing stress and staying well hydrated, may also help.

Figure 1

Headache is one of the most common health-related conditions in Australia, with around 15 per cent of us taking pain-relieving medication for a headache at any given time. It is likely that nearly all of us will experience headache during our lifetime. People of any age can be affected, but people between the ages of 25 and 44 years are more likely to report having a headache. There are different types of headache and many different causes, which explains why the condition is so common. Most headaches have more than one contributing factor. Some of the more common triggers for headache are...
lifestyle related, such as poor diet, stress, muscle tension, and lack of exercise. Serious underlying disorders, such as brain tumors, are rarely the cause of headache, although persistent headache should always be investigated by a doctor.

Types of Headaches

There are several types of headaches; in fact, 150 diagnostic headache categories have been established.

The most common types of headaches are:

Tension Headaches

Also called chronic daily headaches or chronic non-progressive headaches, tension headaches are the most common type of headaches among adults and adolescents. These muscle contraction headaches cause mild to moderate pain and come and go over a prolonged period of time.

Migraines

The exact causes of migraines are unknown. A popular theory is that various triggers cause abnormal brain activity, which in turn causes changes in the blood vessels in the brain. This is called the neurovascular theory. Genetics plays a role in migraines and there are some forms of migraines that are associated with inherited abnormalities in certain parts of the brain. Migraine pain is moderate to severe, often described as pounding, throbbing pain. Migraine headaches can last from four hours to three days and usually occur one to four times per month. Migraines are associated with symptoms such as sensitivity to light, noise, or odors; nausea or vomiting; loss of appetite; and stomach upset or abdominal pain. When a child is having a migraine, he or she often looks pale, feels dizzy, has blurred vision, fever, stomach upset, along with the symptoms listed above.

A small percentage of children's migraines include recurrent (cyclic) gastrointestinal symptoms, vomiting being the most common. Cyclic vomiting means that the symptoms occur on a regular basis -- about once a month. These types of migraines are sometimes called abdominal migraines.

Mixed Headache Syndrome

Also called transformed migraines, mixed headache syndrome is a combination of migraine and tension headaches. Both adults and children experience this type of headache.

Cluster Headaches

The least common -- although the most severe -- type of primary headache, the pain of a cluster headache is intense and may be described as having a burning or piercing quality that is throbbing or constant. The pain is so severe that most cluster headache sufferers cannot sit still and will often pace during an attack. The pain is located behind one eye...
or in the eye region, without changing sides. The term "cluster headache" refers to headaches that have a characteristic grouping of attacks. Cluster headaches occur one to three times per day during a cluster period, which may last two weeks to three months.

![Figure 3](image)

**Figure 3**

**Headaches are Generally Classified by Cause**

**Primary Headaches**

A primary headache is caused by problems with or overactivity of pain-sensitive structures in your head. A primary headache isn't a symptom of an underlying disease. Chemical activity in your brain, the nerves or blood vessels of your head outside your skull, or muscles of your head and neck — or some combination of these factors — may play a role in primary headaches. Some people may carry genes that make them more likely to develop such headaches.

The most common primary headaches are:

- Cluster headache
- Migraine (with and without aura)
- Tension headache (medically known as tension-type headache)
- Trigeminal autonomic cephalalgia (TAC), including cluster headache and paroxysmal hemicrania

There are other headache patterns that are generally considered types of primary headache but are less common. These headaches have distinct features, such as an unusual duration or pain associated with a certain activity. Although these headaches are generally considered primary, each of them could be a symptom of an underlying disease. These headaches include:

- Chronic daily headaches
- Cough headaches
- Exercise headaches
- Sex headaches

Some primary headaches can be triggered by lifestyle factors, including:

- Alcohol, particularly red wine
- Certain foods, such as processed meats that contain nitrates
- Changes in sleep or lack of sleep
• Poor posture
• Skipped meals
• Stress

Secondary Headaches

A secondary headache is a symptom of a disease that can activate the pain-sensitive nerves of the head. Any number of conditions — varying greatly in severity — may cause secondary headaches. Sources of secondary headaches include:

• Acute sinusitis
• Arterial tears (carotid or vertebral dissections)
• Blood clot (venous thrombosis) within the brain — separate from stroke
• Brain aneurysm (a bulge in an artery in your brain)
• Brain AVM (an abnormal formation of brain blood vessels)
• (both cancerous and noncancerous)
• Carbon monoxide poisoning
• Chiari malformation (structural problem at the base of your skull)
• Concussion
• Dehydration
• Dental problems

Migraines

Migraines are less common than tension headaches. They're usually felt as a severe, throbbing pain at the front or side of the head. Some people also have other symptoms, such as nausea, vomiting and increased sensitivity to light or sound.

Migraines tend to be more severe than tension headaches and can stop you carrying out your normal daily activities. They usually last at least a couple of hours, and some people find they need to stay in bed for days at a time.

Most people can treat their migraines successfully with over-the-counter medication. But if they're severe, you may need stronger medication that's only available on prescription. This may be able to relieve and prevent your migraines.

Cluster Headaches

Cluster headaches are a rare type of headache that occur in clusters for a month or two at a time around the same time of year.

They're excruciatingly painful, causing intense pain around one eye, and often occur with other symptoms, such as a watering or red eye and a blocked or runny nose.
Pharmacy medications don't ease the symptoms of a cluster headache, but a doctor can prescribe specific treatments to ease the pain and help prevent further attacks.

**Medication and Painkiller Headaches**

Some headaches are a side effect of taking a particular medication. Frequent headaches can also be caused by taking too many painkillers. This is known as a painkiller or medication-overuse headache.

A medication-overuse headache will usually get better within a few weeks once you stop taking the painkillers that are causing it, although your pain may get worse for a few days before it starts to improve.

**Hormone Headaches**

Headaches in women are often caused by hormones, and many women notice a link with their periods. The combined contraceptive pill, the menopause and pregnancy are also potential triggers.

Reducing your stress levels, having a regular sleeping pattern, and ensuring you don't miss meals may help reduce headaches associated with your menstrual cycle.

**Other Causes of Headaches**

Headaches can also have a number of other causes, including:

- drinking too much alcohol
- A head injury or concussion
- A cold or flu
- Temporomandibular Disorders – problems affecting the “chewing” muscles and the joints between the lower jaw and the base of the skull
- sinusitis – inflammation of the lining of the sinuses; read more about sinus headaches
- carbon monoxide poisoning
- sleep apnoea – a condition where the walls of the throat relax and narrow during sleep, interrupting normal breathing

**Headache and Dental Problems**

If the teeth of a person’s upper and lower jaw fail to meet smoothly, the resulting muscle tension in the jaw can
cause headache. Treatment may include correcting the bite, replacing missing teeth or using occlusal splints, which allow the jaw to close without dental interference. Surgery may be needed in severe cases. Tooth decay, dental abscesses and post-extraction infection can cause headache, as well as referred pain to the face and head, and these need to be professionally treated by a dentist.

**Headache Caused by Infection**

Many infections of the nose, throat and ear can cause headache. Depending on the disorder, treatment can include medications such as antibiotics, decongestants or antihistamines. Persistent problems, such as chronic tonsillitis, may need surgery as a final resort. Consult with an ear, nose and throat specialist.

**Headache Caused by Diet and Food**

According to some studies, what we eat and when we eat it can play a significant role in headache. Different causes of diet-related headache include:

- Fluctuations in blood-sugar levels, which can lead to spasm of the arteries in the head
- Caffeine withdrawal, commonly caused by regular and excessive consumption of coffee or tea
- Food additives, such as MSG (monosodium glutamate)
- Naturally occurring chemicals in foods, such as amines.

Some other foods can cause headache in susceptible people. It is important to seek professional help. Self-diagnosis of food sensitivities can result in unnecessary diets that may not work. It’s a good idea to keep a diary of what you ate or drank in the 24 hours before a headache. This gives clues to the triggers of food-related headache. Healthcare professionals who may be able to help include a doctor, dietitian or naturopath.

**Eye problems and headache**

If a person has difficulties with their vision, such as long-sightedness, they tend to squint and strain their eye muscles in order to better focus their vision. Eye diseases such as glaucoma can cause headache by referring pain into the structures of the head. Many of the eye problems that contribute to headache can be treated with prescription glasses or contact lenses. Talk to a qualified eye-care specialist such as an optometrist.

**Medications and Headache**

Medications are designed for a particular target in the body, such as a diseased organ. However, they can also affect other areas in the body. Unwanted side effects or adverse reactions are possible with all medications, including prescription and over-the-counter medications, herbal preparations and vitamin pills. Oral contraceptives (‘the pill’) can cause headache as an unwanted side effect. Hormone replacement therapy (HRT) – also known as hormone therapy (HT) – makes headaches worse for some women. Some diabetes medications can also make headaches worse.

**Suggestions for Reducing the Risk of Medication-Induced Headache Include**

- Follow the dosage directions on the label.
- Don’t mix prescription medications with drugs such as alcohol.
• Avoid dependence on painkillers.

• Report any side effects or unusual symptoms to your doctor immediately.

If you believe that medications may be giving you recurring headache, it is important to consult with your doctor. In many cases, a different medication can be prescribed. There are many causes of recurring headache, with multiple factors working in combination. Rather than address the causes, it may seem easier to take pain-relieving medications, such as aspirin. However, taking more than three doses of these per week could make your problem worse. Once the medications wear off, the headache returns because the triggers remain. If you then take more pain-relieving medications, the cycle of relief and rebounding headache continues, prompting you to take ever-increasing amounts of medication.

**Ear, Nose and Throat Disorders and Headache**

Disorders of the ear, nose and throat that can cause recurring headache include:

• Sinus problems - caused by infection, cold, flu or allergic reactions such as hay fever

• Labyrinthitis - the general term for any type of inflammation of the inner ear

• Infection - of the ear, nose or throat, caused by either bacteria or viruses

• Trauma - such as a blow to the ear or perforation of the eardrum

• Hay fever - when the immune system overreacts to irritants such as pollen

• Tonsillitis - an infection most often caused by the bacterium *streptococcus*.

**The Nervous System and Headache**

Irritated, inflamed or damaged nerves can bring on a headache. Causes may include:

• Haemorrhages - some health conditions, such as hypertension (high blood pressure) and diabetes, can damage the blood vessels

• Infection - such as meningitis, which is inflammation of the membranes lining the brain and spinal cord

• Nerve damage - can be caused by, for example, vitamin deficiencies or trauma to the head or neck

• Very rarely, a tumor.

Neurologists specialise in disorders of the nerves and brain. It is rare for headaches to be caused by serious problems such as a brain tumor, but these need to be ruled out through medical examination. Usually, you will only be referred to a neurologist after all other causes of chronic headache have been investigated and eliminated. Some neurological tests include CT and MRI scans. Treatment depends on the disorder.

**Cluster Headache**

Cluster headaches are relatively uncommon and tend to mainly affect men. Cluster headaches:

• Usually involve severe pain, localised to one eye

• Include other symptoms, like swelling and watering of the affected eye

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editor@tjprc.org
• Can be triggered by alcohol and cigarettes, but the underlying cause is unknown
• Are treated with medication or oxygen therapy.

Diagnosis of Headache

Headache can be caused by many contributing factors working together. That’s why you need professional advice to investigate and properly diagnose the specific factors behind your recurring headache. In some cases, headaches may be a warning about more serious underlying problems. Tests can include scans, eye tests and sinus x-rays.

Factors that are Considered when Diagnosing a Headache Include.

• Location of the pain, such as around one eye or over the scalp
• Degree of pain experienced
• Duration of the headache
• Other symptoms, such as visual disturbances or a sore neck
• How often the headache recurs
• Factors that worsen the headache, such as certain foods
• Factors that improve the headache, such as massage.

Treatment for Headaches

Successfully treating chronic headache usually requires a combined approach that takes all the triggers for a person into account. Ask your doctor or healthcare professional for help in treating chronic headache. Your doctor can refer you to appropriate experts, such as ear, nose and throat specialists, neurologists, optometrists and physical therapists.

Treating a headache depends on its cause. Some of the various treatments include

• Over-the-counter pain-relieving medications, such as aspirin or paracetamol
• Relaxation techniques, such as massage
• Changing your diet
• Alternative therapies, such as acupuncture or chiropractic
• Stress management
• Eliminating any medications that may be causing headache as a side effect, such as birth-control pills
• Medications that act on the arteries
• Treatment for any underlying disorder, such as high blood pressure, neck problems or jaw problems.

Choosing a Complementary Therapist

In addition to conventional medical treatment, you may benefit from the help of a complementary therapist. Usually, your doctor will have a list of trusted complementary therapists. If not, suggestions include:
Contact the professional association for your chosen therapy and ask for a list of members in your area.

Ask your friends for word-of-mouth recommendations.

During the first visit with your therapist, ask about their training and qualifications.

Treat with suspicion any therapist who advises you to stop your conventional medical treatment, and consult with your doctor before stopping any medication.

**Headaches Classifications**

In 2005, the International Headache Society released its latest classification system for headache. Because so many people suffer from headaches and because treatment sometimes is difficult, it was hoped that the new classification system would help health care professionals make a specific diagnosis as to the type of headache and allow better and more effective options for treatment.

There are three major categories of headache based upon the source of the pain:

- Primary headaches.
- Secondary headaches.
- Cranial neuralgias, facial pain, and other headaches.

**REFERENCES**

1. Merriam-Webster Dictionary: Leukemia


14. Novartis

15. Patients with Chronic Myelogenous Leukemia Continue to Do Well on Imatinib at 5-Year Follow-Up Medscape Medical News 2006.

16. Updated Results of Tyrosine Kinase Inhibitors in CML ASCO 2006 Conference Summaries.


21. Reference list is found at image description page in Wikimedia Commons


