CONDITION

Headaches/migraines

Headaches cause pain in the head or face, while migraine causes repeated attacks with neurological symptoms.

WHAT IT IS
Recurrent headache conditions, including migraine and tension-type headache

BODY SYSTEM
Nervous system

MAIN SYMPTOMS
Head pain, nausea, light sensitivity, sound sensitivity

WHAT CAUSES IT
Brain pain pathways, genetics, illness, or injury

HOW IT IS DIAGNOSED
Symptom history and examination; tests exclude secondary causes

MAIN TREATMENT
Attack-relief medicines, prevention, and trigger management

CAN IT BE CURED?
No - attacks can often be controlled

IS IT AN EMERGENCY?
Sometimes - sudden severe pain or new neurological symptoms

LONG-TERM OUTLOOK
Often manageable, though patterns can change over time

Overview

A headache is pain felt in the head, face, or upper neck. It is a symptom rather than a single diagnosis. Headaches can occur on their own or because of another condition, such as an infection, head injury, or medication side effect.

Primary headache conditions are not caused by another illness. The most common are migraine and tension-type headache. Cluster headache is less common but causes extremely severe attacks, usually around one eye.

Migraine is a neurological condition involving changes in how the brain processes pain and sensory information. An attack may cause throbbing or pulsing pain, nausea, and sensitivity to light, sound, smells, or movement. Some people also have aura, which can affect vision, speech, sensation, or, more rarely, movement.

Most headaches are not dangerous. However, a sudden or unusual headache can sometimes be a warning sign of bleeding, infection, stroke, dangerously high pressure around the brain, or another urgent condition. The pattern and accompanying symptoms matter more than pain intensity alone.

Symptoms

Tension-type headache often feels like pressure, tightness, or a band around the head. It usually affects both sides and may cause tenderness in the scalp, neck, or shoulders. Everyday activity does not usually make it much worse, and nausea is uncommon.

Migraine pain is often moderate to severe and may affect one or both sides. Movement can make it worse. An untreated attack commonly lasts several hours and may continue for up to three days. Symptoms can include:

Some people notice changes before the pain begins, such as food cravings, yawning, mood changes, neck stiffness, or trouble concentrating. These are known as premonitory symptoms.

Aura usually develops gradually before or during an attack and often lasts less than an hour. It may cause flashing lights, zigzag lines, blind spots, tingling, numbness, or difficulty finding words. Aura can occasionally happen without head pain. New aura-like symptoms still need assessment because stroke and other conditions can cause similar symptoms.

Cluster headache causes repeated, severe pain around one eye or temple. The eye may water or become red, while the eyelid may droop and the nose may run or feel blocked on the same side. People often feel restless during an attack.

- Pulsing or throbbing head pain
- Nausea or vomiting
- Sensitivity to light, sound, smells, or touch
- Difficulty concentrating, dizziness, or marked tiredness

Causes and risk factors

Primary headaches are linked to changes in nerves, blood vessels, and chemical signalling in the brain. Migraine often runs in families, but there is no single cause. Having a genetic tendency does not mean every family member will develop it.

An attack may be associated with a change in routine rather than one simple trigger. Possible triggers include missed meals, dehydration, poor or unusually long sleep, stress, relaxation

after stress, alcohol, bright light, strong smells, and hormonal changes. Triggers are personal, and avoiding every possible trigger can become restrictive without improving symptoms.

Menstrual hormone changes can affect migraine. Patterns may also change during pregnancy, after childbirth, or around menopause.

Secondary headaches have another cause. Examples include viral illness, sinus or dental problems, head injury, sleep apnoea, eye conditions, or side effects from medicines. Frequent use of short-term headache medicines can itself lead to medication-overuse headache.

Diagnosis

There is no blood test or brain scan that confirms migraine or tension-type headache. Diagnosis is usually based on the pattern of symptoms, medical history, and a physical and neurological examination. A neurological examination checks functions such as strength, sensation, balance, reflexes, vision, and speech.

A headache diary can help show how often attacks occur, how long they last, associated symptoms, menstrual timing, possible triggers, and which medicines were used. It can also show whether treatment is helping.

CT or MRI scans are not routinely needed when symptoms fit a primary headache condition and the examination is normal. A scan may be arranged when there are warning signs, a major change in pattern, an abnormal examination, or concern about another cause. Other tests, such as blood tests, an eye examination, or a lumbar puncture to test fluid around the brain and spinal cord, are used only in specific situations.

Because migraine aura and stroke can share symptoms, a first episode of weakness, major speech difficulty, confusion, or sudden visual loss needs urgent assessment rather than self-diagnosis.

Treatment and management

Treatment depends on the headache type, attack frequency, effect on daily life, other health conditions, and previous response to medicines.

For occasional tension-type headache or migraine, short-term treatment may include paracetamol or a non-steroidal anti-inflammatory drug, such as ibuprofen. These medicines are not suitable for everyone. A pharmacist or clinician can help check factors such as pregnancy, stomach ulcers, kidney problems, heart disease, blood-thinning medicines, and interactions with other treatments.

Migraine-specific medicines include triptans like sumatriptan or rizatriptan . Newer options include medicines that block a pain-signalling protein called CGRP and medicines called ditans. Availability differs by country. Anti-sickness medicine may be used when nausea or vomiting is prominent and can sometimes improve absorption of other treatment.

Taking acute treatment early in the headache phase may work better for many people. However, triptans and some other treatments should not be taken during aura unless a clinician has advised when to use them.

Preventive treatment may be considered when attacks are frequent, prolonged, disabling, or difficult to treat. Options include certain blood-pressure medicines, antiseizure medicines, antidepressants like sertraline or fluoxetine , CGRP-targeting medicines, and botulinum toxin injections for some people with chronic migraine. These treatments reduce attack frequency or severity rather than curing the condition. Finding a useful option can take several months and may require adjustments.

Cluster headache needs a specific treatment plan. Fast-acting treatments can include oxygen or a triptan in a suitable form. Preventive medicines may be used during a cluster period.

Regular meals, enough fluids, consistent sleep, physical activity, and stress-management approaches may support medical treatment. Relaxation training, cognitive behavioural therapy, and biofeedback can help some people. Opioids like oxycodone or morphine are generally avoided because they often work poorly for migraine and can increase medication-overuse headache and dependence.

Complications

Frequent attacks can disrupt sleep, work, education, relationships, and mental health. Some people develop chronic migraine, meaning headaches occur on many days over several months, with migraine features on some of those days.

Medication-overuse headache can develop when medicines used for immediate relief are taken too frequently. The risk and safe limits differ by medicine. Increasing use, reduced benefit, or near-daily headache should be discussed during routine follow-up.

A migraine lasting longer than 72 hours is called status migrainosus. It may cause dehydration or make usual treatment difficult. Medical assessment may be needed, especially if fluids cannot be kept down.

Migraine with aura is associated with a small increase in stroke risk. The absolute risk remains low for most people, but smoking and some oestrogen-containing contraceptives may add to it. Contraceptive choices can be reviewed with a clinician.

Prevention

The inherited tendency toward migraine cannot currently be prevented. Not every attack can be avoided, and an attack does not mean that someone failed to manage a trigger.

A diary may reveal useful patterns without requiring major lifestyle restrictions. Helpful measures can include:

Some people consider supplements such as magnesium or riboflavin. Evidence and product quality differ, and supplements can cause side effects or interact with medicines. Their safety should be checked during pregnancy or when other treatments are being used.

- Keeping sleep and meal times reasonably consistent
- Drinking enough fluid and limiting personal alcohol triggers
- Taking breaks from glare, prolonged screen use, or sustained posture
- Avoiding frequent reliance on short-term headache medicines
- Following preventive treatment consistently when it has been prescribed

Living with it and what to expect

Headache patterns can change over months and years. Migraine may begin in childhood, adolescence, or adulthood. Attacks may become more or less frequent with stress, sleep disruption, hormonal changes, illness, or changes in routine. Many people have long periods with fewer attacks, but a permanent end to symptoms cannot be promised.

Between migraine attacks, most people have no neurological damage and can continue their usual activities. Recovery symptoms, sometimes called the postdrome, may include tiredness, poor concentration, mood changes, or scalp sensitivity for a day or two.

A practical management plan often includes what to take during an attack, when to stop activity and rest, and when to seek help. It may also include workplace or school adjustments, such as access to water, regular breaks, reduced glare, or a quiet place during an attack.

Routine reviews are useful if the pattern changes, treatment stops working, side effects develop, or medicines are needed more often. Improvement is usually judged by fewer headache days, milder attacks, better function, or less need for rescue treatment-not necessarily by complete freedom from headaches.

When to get medical help

Call emergency services for a headache that:

Seek prompt medical assessment for a new headache with cancer, a weakened immune system, unexplained weight loss, or symptoms such as persistent vomiting. A new headache after age 50, pain triggered by coughing or exertion, or a major change from an established pattern also needs assessment.

Arrange routine follow-up if headaches are becoming more frequent, regularly interfere with daily life, wake you repeatedly from sleep, or require increasing amounts of medicine. New or changing aura symptoms should also be reviewed.

- Reaches maximum intensity within seconds or a minute
- Starts with new weakness, facial drooping, confusion, fainting, seizure, or major speech difficulty
- Follows a significant head injury, especially with vomiting or increasing drowsiness
- Occurs with fever, a stiff neck, a new rash, confusion, or severe illness
- Comes with sudden loss of vision or a painful red eye
- Begins during pregnancy or soon after childbirth and is sudden, severe, or accompanied by vision changes or high blood pressure

Common questions

What is the difference between a headache and a migraine?

Headache describes pain in the head or face. Migraine is a specific neurological condition that causes attacks, often with nausea and sensitivity to light or sound. Migraine can sometimes cause aura or other symptoms without much head pain.

Can a brain scan show migraine?

Usually not. MRI and CT scans may be normal during and between migraine attacks. They are used to look for another cause when symptoms, examination findings, or the headache pattern raise concern.

How long can a migraine last?

The headache phase commonly lasts from several hours to three days without effective treatment. Tiredness and difficulty concentrating may continue afterward. An attack lasting longer than 72 hours, repeated vomiting, or inability to drink warrants medical advice.

Why am I waking up with headaches?

Possible reasons include migraine, teeth grinding, neck strain, dehydration, medication overuse, caffeine withdrawal, or sleep problems such as sleep apnoea. Repeated morning headaches, especially with loud snoring or daytime sleepiness, should be assessed rather than attributed to one cause.

Can migraine be cured permanently?

There is no permanent cure at present. Treatment can often make attacks less frequent, shorter, or easier to manage. Some people have long periods with few symptoms, while others need ongoing preventive treatment.

Is migraine dangerous?

Migraine itself usually does not damage the brain. Rarely, serious conditions can resemble migraine, especially when symptoms are sudden or new. Emergency assessment is important for sudden severe pain, weakness, confusion, seizure, or major changes in speech or vision.

Sources

- National Institute for Health and Care Excellence. Headaches in over 12s: diagnosis and management (CG150)
- International Headache Society. International Classification of Headache Disorders, 3rd edition
- National Institute of Neurological Disorders and Stroke. Migraine
- Department of Veterans Affairs and Department of Defense. Clinical Practice Guideline for Management of Headache, 2023
- American Headache Society. The American Headache Society consensus statement: Update on integrating new migraine treatments into clinical practice . Headache . 2021;61(7):1021-1039
- Charles AC, Digre KB, Goadsby PJ, Robbins MS, Hershey A. Calcitonin gene-related peptide-targeting therapies are a first-line option for the prevention of migraine: An American Headache Society position statement update . Headache . 2024;64(4):333-341