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Migraine

Migraine causes attacks of headaches, often making you feel sick or causing you to be sick. Treatment options include avoiding possible triggers, painkillers, anti-inflammatory painkillers, anti-sickness medicines, and triptan medicines. A medicine to prevent migraine attacks is an option if the attacks are frequent or severe.

What is a migraine?

Migraine is a condition that causes attacks (episodes) of headaches. Other symptoms such as feeling sick (nausea) or being sick (vomiting) are also common. Between migraine attacks, the symptoms go completely.

What causes migraines?

The cause of migraine is not clear.

A theory that used to be popular was that blood vessels in parts of the brain become narrower (go into spasm) which accounted for the aura. The blood vessels in the brain were then thought to open wide (dilate) soon afterwards, which accounted for the migraine headache. However, this theory is not the whole story and, indeed, may not even be a main factor.

It is now thought that some chemicals in the brain increase in activity and parts of the brain may then send out confusing signals which cause the symptoms. The exact changes in brain chemicals are not known. It is also not clear why people with migraine should develop these changes. However, something may trigger a change in activity of some brain chemicals to set off a migraine attack.

Recent research has looked at the role of calcitonin gene-related peptide (CGRP) in migraine development, There is hope that this may provide a new route for treating migraine.

Menstrual migraine

The cause of, or trigger to, menstrual migraine is thought to be the fall of the level of oestrogen that occurs at this time in the cycle. Oestrogen is one of the chemicals (hormones) that control the menstrual cycle. The blood level of oestrogen falls just before a period. It is not a low level of oestrogen that is thought to be the trigger, but the drop in the level of oestrogen from one level to another.

Genetics

Migraine is not classed as an inherited condition. However, there is often a family history of migraine. So, there is probably some genetic factor involved. Therefore, if you have one or more close relatives who have migraine this is a risk factor for having migraine yourself.

Migraine symptoms

Migraine without aura

This is the most common type of migraine. Symptoms include the following:

- **The headache** is usually on one side of the head, typically at the front or side. Sometimes it is on both sides of the head. Sometimes it starts on one side and then spreads all over the head. The pain is moderate or severe and is often described as throbbing or pulsating. Movements of the head may make it worse. It often begins in the morning but may begin at any time of the day or night. Typically, it gradually becomes worse and peaks after 2-12 hours, then gradually eases off. However, it can last from 4 to 72 hours.

Other migraine symptoms that are common

- Feeling sick (nausea).
- Being sick (vomiting).
- Sensitivity to light and sound, so that you may just want to lie in a dark room.

Other symptoms that sometimes occur

- Being off food.
- Blurred vision or blind spots.
- Poor concentration.
- Stuffy nose.
- Hunger.
- Diarrhoea.
- Tummy (abdominal) pain.

- Passing lots of urine.
- Going pale.
- Sweating.
- Scalp tenderness.
- Sensations of heat or cold.

Migraine with aura

This is less common than migraine without aura. The symptoms are the same as those described above, but also include a warning sign, called a **migraine aura**, which comes on before the headache begins.

- **Visual aura** is the most common type of migraine aura. It usually affects just one side of your vision and gradually gets bigger over 5-20 minutes. Examples include:
 - A temporary loss of part of vision.
 - A bright, flashing light, often in a C-shaped pattern, a bit like looking through an old-fashioned kaleidoscope, or zig-zag lines.
 - Objects or letters on a page may seem to rotate, shake, or boil.
- **Numbness and pins and needles** are the second most common type of migraine aura. Numbness usually starts in the hand, travels up the arm and then involves the face, lips and tongue. The leg is sometimes involved.
- **Problems with speech** are the third most common type of migraine aura. If you have an aura before your migraine that includes two different types of nerve problems (such as vertigo, tinnitus or slurred speech) this might be called a brainstem aura. It used to be known as basilar migraine.
- Other types of migraine aura include an odd smell, food cravings, a feeling of well-being, and other odd sensations.

One of the above migraine auras may develop, or several may occur one after each other. Each aura usually lasts just a few minutes before going but can last up to 60 minutes. The aura usually goes before the headache begins. The headache usually develops within 60 minutes of the end of the aura but it may develop a lot sooner than that - often straight afterwards. Sometimes, just the aura occurs and no headache follows (silent migraine). Most people who have migraine with aura also have episodes of migraine without aura.

Migraine triggers

Most migraine attacks occur for no apparent reason. However, something may trigger migraine attacks in some people. Triggers can be all sorts of things. For example:

- **Diet.** Dieting too fast, irregular meals, cheese, chocolate, red wines, citrus fruits, foods containing a food additive called tyramine and not drinking enough water (dehydration).
- **Environmental.** Smoking and smoky rooms, glaring light, VDU screens or flickering TV sets, loud noises, strong smells.
- **Psychological.** Depression, anxiety, anger, tiredness, stress, etc. Many people with migraine cope well with stress but have attacks when they relax, leading to so-called weekend migraine.
- **Medicines.** For example, hormone replacement therapy (HRT), some sleeping tablets, and the contraceptive pill. [See the separate leaflet called Migraine and Combined Hormonal Contraception for more details.](#)
- **Other.** Periods (menstruation), shift work, different sleep patterns, and the menopause.

It may help to keep a migraine diary. Note down when and where each migraine attack started, what you were doing, and what you had eaten that day. A pattern may emerge, and it may be possible to avoid one or more things that may trigger your migraine attacks. See the leaflet called [Migraine trigger diary](#). This gives more details and includes a diary that you can print out and fill in.

How long do migraines last?

Typically the headache of a migraine without aura lasts from 4 hours to as long as 72 hours.

A migraine aura usually takes a few minutes to develop then lasts for five minutes to an hour before the headache comes. The headache usually starts within an hour of the aura ending and lasts the same as the headache of a migraine without aura.

A migraine attack can typically be divided into four phases:

- A warning (premonitory) phase occurs in up to half of people with migraine. You may feel irritable, depressed, or tired, have food cravings, or just know that a migraine is going to occur. You may have these feelings for hours or even days before the onset of the headache.
- The aura phase (if it occurs).
- The headache phase.
- The resolution phase when the headache gradually fades. During this time you may feel tired, irritable, or depressed, and may have difficulty concentrating.

Migraine treatment

There are various treatments for a migraine attack, from simple painkillers to migraine medication which is specifically for migraine, such as triptans.

There are also various treatments you can take to *prevent* migraine attacks, if you have frequent or severe attacks. It may not stop all attacks, but their number and severity are often reduced. Medicines for preventing migraines are taken every day. They are not painkillers and are different to those used to treat each migraine attack.

[See the separate leaflet called Migraine Treatment \(Triptans\).](#)

Migraine and children

Some points to note about migraine in children include the following:

- Migraine is common in children. It affects about 1 in 10 children of school age.
- Symptoms can be similar to those experienced by adults. However, sometimes symptoms are not typical. For example, compared with adults, attacks are often shorter, and pain may be on both sides of the head. Also, associated symptoms such as feeling sick (nausea) and being sick (vomiting) may not occur.
- Abdominal migraine (described below) mainly affects children.
- Common triggers in children include missing meals, lack of fluid in the body (dehydration), and irregular routines. So, if a child is troubled with migraine attacks, it is important to try to have regular routines, with set meals and bedtimes. Also, encourage children to have plenty to drink.
- Many of the medicines used by adults are not licensed for children. Find out more about migraine medication for children in [the separate leaflet called Migraine Medication, Treatment and Prevention](#).

Migraine when pregnant or breastfeeding

The good news is that about 2 in 3 women with migraine have an improvement whilst pregnant or breastfeeding. However, about 1 in 20 women with migraine find that their migraine gets worse whilst pregnant. The bad news is that many of the medicines used to treat migraine should not be taken by pregnant or breastfeeding women. Learn more about migraine medication when pregnant or breastfeeding in [the separate leaflet called Migraine Treatment \(Triptans\)](#).

How is migraine diagnosed?

There is no test to confirm migraine. Migraine is usually diagnosed by the typical symptoms and by an examination which does not reveal any abnormality.

However, some people with migraine have non-typical headaches. Therefore, sometimes tests are done to rule out other causes of headaches. Also, with some uncommon or rare types of migraine such as ocular migraine, tests are sometimes done to rule out other causes of these symptoms. For example, temporary loss of vision can be due to various causes apart from ocular migraine.

Remember, if you have migraine, you do not have symptoms between attacks. It is the episodic nature of the symptoms (that is, they come and then go) that is typical of migraine. A headache that does not go, or other symptoms that do not go, are not due to migraine.

Tension headaches

These are sometimes confused with migraine. These are the common headaches that most people have from time to time. [See the separate leaflet called Tension Headache for more details](#). **Note:** if you have migraine, you can also have tension headaches at different times to migraine attacks.

Cluster headaches

These may also be confused with migraine. Cluster headaches are attacks of severe one-sided head pain, usually centred in or around one eye or temple, which occur in groups or clusters. The pain is extremely severe and can be accompanied by eye watering, eyelid drooping and facial sweating on the affected side. Cluster headaches usually last 45-90 minutes. [See the separate leaflet called Cluster Headaches for more information](#).

If you take painkillers too often for any kind of headache you may develop **medication-overuse headache** (also called medication-induced headache and sometimes also called an analgesic headache). [You can read more about this type of headache in the separate leaflet called Migraine Medication, Treatment and Prevention](#).

What is a silent migraine?

Sometimes you will hear people talk about 'silent migraine' or 'migraine aura without headache'. This occurs when you develop a migraine, either with or without aura, that is typical in every other way but doesn't cause a headache. So you experience all of the phases described above but miss out the headache phase.

Silent migraine can occur in someone who used to have migraine but can also happen from time to time in people who still get the more typical migraine attacks.

Less common types of migraines

There are various other types of migraine which are uncommon, and some more types which are rare. These include:

Menstrual migraine

Menstrual migraines are migraines that happen around the time of a woman's [period](#). The symptoms of menstrual migraine are just the same as migraine with or without aura; it is the timing of the migraine that makes it a menstrual migraine. You can read more about menstrual migraine in our leaflet on menstrual migraine and in [the separate leaflet called Migraine Medication, Treatment and Prevention](#).

Abdominal migraine

This mainly occurs in children. Instead of headaches, the child has attacks of tummy (abdominal) pain which last several hours. Typically, during each attack there is no headache, or only a mild headache. There may be associated with sickness, being sick (vomiting) or aura symptoms.

Commonly, children who have abdominal migraine switch to develop common migraine in their teenage years.

Ocular migraine

This is sometimes also called retinal migraine, ophthalmic migraine or eye migraine. This causes temporary loss of all or part of the vision in one eye. This may be with or without a headache. Each attack usually occurs in the same eye. There are no abnormalities in the eye itself and vision returns to normal.

Important note: consult a doctor urgently if you have a sudden loss of vision (particularly if it occurs for the first time). There are various causes of this and these need to be ruled out before ocular migraine can be diagnosed.

Hemiplegic migraine

This is rare. In addition to a severe headache, symptoms include weakness (like a temporary paralysis) of one side of the body. This may last up to several hours, or even days, before resolving. Therefore, it is sometimes confused with a stroke. You may also have other temporary symptoms of:

- Severe dizziness (vertigo).
- Double vision.
- Visual problems.
- Hearing problems.
- Difficulty speaking or swallowing.

Important note: consult a doctor urgently if you get sudden weakness (particularly if it occurs for the first time). There are other causes of this (such as a stroke) and these need to be ruled out before hemiplegic migraine can be diagnosed.

Vestibular migraine

This may affect up to one in a hundred people. It causes recurring episodes of [severe dizziness \(vertigo\)](#) alongside other typical migraine symptoms and lasts between 5 minutes and 72 hours. The dizziness that you get with vestibular migraine is not an aura. It occurs at the same time as a headache. It can occur in people who get migraine with aura and those who get migraine without aura.

Basilar-type migraine

This is rare. The basilar artery is in the back of your head. It used to be thought that this type of migraine originated due to a problem with the basilar artery. It is now thought that this is not the case, but the exact cause is not known.

Symptoms typically include headache at the back of the head (rather than one-sided as in common migraine). They also tend to include strange aura symptoms such as:

- Temporary loss of vision.
- Double vision.
- Dizziness.
- Ringing in the ears.
- Jerky eye movements.
- Trouble hearing.
- Slurred speech.

Unlike hemiplegic migraine, basilar-type migraine does not cause weakness. There is an increased risk of having a stroke with this type of migraine.

Important note: consult a doctor urgently if you develop the symptoms described for basilar-type migraine (particularly if they occur for the first time). There are other causes of these symptoms (such as a stroke) and these need to be ruled out before basilar-type migraine can be diagnosed.

Further reading & references

- [Headaches in over 12s: diagnosis and management](#); NICE Clinical Guideline (September 2012, last updated December 2021)
- Santos-Lasaosa S, Belvis R, Cuadrado ML, et al; Calcitonin gene-related peptide in migraine: from pathophysiology to treatment. *Neurologia (Engl Ed)*. 2022 Jun;37(5):390-402. doi: 10.1016/j.nrleng.2019.03.025. Epub 2021 May 26.
- [Migraine](#); NICE CKS, September 2022 (UK access only)
- [The International Classification of Headache Disorders, 3rd edition \(beta version\)](#).; The International Classification of Headache Disorders, 3rd edition (beta version). *Cephalalgia*. 2013 Jul;33(9):629-808. doi: 10.1177/0333102413485658.
- [Pescador Ruschel MA, De Jesus O; Migraine Headache](#)

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Last updated by: Dr Hayley Willacy	Peer reviewed by: Dr Colin Tidy	
Last updated: 22/02/2023	Next review date: 21/02/2028	Document ID: 4299 (v44)

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