

Fact sheet

What is Migraine?

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“When I get a migraine it makes me very ill and really puts me out of action. I can feel it coming on and then the full blown migraine emerges and I feel terrible. As the second day progresses, the pain finally begins to lessen. The third day leaves me with a vague pain and feeling absolutely shattered but otherwise okay.”

What is migraine?

The word migraine can mean the attack, or can mean the underlying disease that causes the attacks. The Greek word for half is *hemi* and for skull is *kranion*, hence *hemicrania*: so some prefer to pronounce it “mee-graine”, though “my-graine” is fine. Migraine pain can be just on one side of the head though can be on both sides, swap sides, or asymmetrical.

Migraine is more than just a headache; but almost all headache is migraine.

Migraine pain normally comes with nausea (queasiness) or vomiting; and oversensitivity to light, noise, movement, or smell.

If you have attacks of a bad head lasting hours or days, with queasiness or a preference for rest (even if you can carry on, with an effort) you almost certainly have migraine.

Migraine is a disorder of the brain. If the brain is a computer, migraine is a software not a hardware problem.

Migraine can be acute or episodic (infrequent attacks) or chronic (symptoms more often than not, for three months or longer).

Who gets migraine?

Anyone can get migraine. It affects 1 in 5 women, 1 in 15 men. It usually begins in early life, though diagnosis may be delayed or overlooked until it becomes a problem, often in working or middle age. Migraine usually gets less troublesome in older people, though it can begin at any age.

What are the different types of migraine?

Migraine can be acute (90%) or chronic (10%); with aura (10-30%) or without aura (70-90%). Some people have migraine aura without headache.

People who have attacks of migraine, are more headache-prone than people without migraine, but not all these headaches are typical migraine attacks. Many headache experts think “tension headache” is simply a featureless form of migraine. “Icepick pain”, is an instantaneous stabbing pain in any part of the head. Alcohol hangover headache, travel sickness, and vertigo are more often suffered by people with migraine.

What are the symptoms of an acute migraine attack?

There can be four stages, though fortunately not all patients get all stages:

1. *Prodrome* is mood change hours or days before the headache. This can be mistaken for trigger: “stress/chocolate causes my migraine” when in fact the prodrome causes irritability, or makes you crave chocolate
2. *Aura* usually happens just before the headache. Each aura symptom (there can be more than one) lasts up to an hour, typically affecting vision, though can cause numbness, dizziness, paralysis, speech difficulty, memory loss, or collapse. Visual aura normally begins off-centre asymmetrically in both eyes and gradually enlarges with blackness, zigzags, lights or patterns which can affect half or all vision. It can be helpful to cover or close one then the other eye to check that vision from both eyes is affected.
3. *Head pain* or pressure is typically thumping or pulsing. It can affect any part of the head, including the face or the neck. It can feel just like “sinusitis”. It lasts hours or days, not minutes or weeks. If head pain is mild or absent, the diagnosis is difficult.
4. *Recovery* can take a day or two, when there are no particular symptoms other than feeling ill.

Do I need any tests?

The diagnosis of migraine is based on the nature and time-pattern of symptoms. Physical examination is normal. Most people with migraine need no tests. Treatment response does not diagnose migraine.

A normal brain scan does not confirm a diagnosis of migraine. One in four healthy people (which includes people with migraine) have a technical abnormality on a brain scan, which can be worrying.

What causes migraine?

Pain is an important alarm signal; migraine is like a faulty alarm, when pain nerves at the back of the brain (the brainstem) switch on when nothing else is wrong.

This nerve error causes other changes, including to blood vessels and to the gut; light seems too bright, noise too loud, and so on.

Migraine aura happens when changes in the brainstem trigger a wave of nerve suppression that spreads over the cortex (outer lining, or nerve cell layer) of the brain.

The underlying cause is not yet certain, but most experts think there is an error in ion channels on nerve membranes, which makes the nerve malfunction. The ion channel disorder is presumably genetic, but the triggers of attacks are environmental.

Migraine also associates with a relative shortage of the brain chemical serotonin (also called 5-hydroxytryptamine or 5HT), in the brainstem. The same chemical change in the mid part of the brain causes insomnia and fatigue; and at the front of the brain causes stress. This is why migraine associates with stress, but is not caused by stress.

What are migraine triggers?

In many, but not all people it is possible to identify and avoid migraine triggers.

Migraine likes a regular biorhythm.

Irregular or skipped meals should be avoided. People with migraine should take a fibre-containing breakfast within an hour of getting up, before leaving home for work or school. Eat little and often.

Some people think dehydration can trigger migraine. This is easy to avoid.

Try to have a regular body clock, with the same or similar time for sleep and for getting up every day. Avoid shift work, or try to stay on the same shift all the time. On weekends or days off, stick to the same daily ritual as in the working week.

The let-down from stress is another reason for migraine at the weekend – try to keep stress levels relatively constant, or change gradually.

Unaccustomed exercise can trigger migraine – try to exercise regularly at the same time every day; build up fitness gradually.

In women, a falling oestrogen level can trigger migraine at menstruation, or after childbirth. The oestrogen contraceptive pill can sometimes worsen migraine (and should not be used if there is aura).

Change in the weather can trigger migraine: but can't be avoided.

One of the commonest causes of worsening migraine, is too many pills! See the fact sheet on medication overuse.

Travel is a common migraine trigger. Many of the above triggers can contribute to migraine on holiday.

Some people think that foods such as cheese, chocolate, citrus fruits and tyramine-containing foods trigger migraine. This opinion is not often shared by headache specialists.

Finally, anything that causes headache, will trigger migraine attacks in the susceptible. Head injury, and alcohol, are the common culprits.

What can I do to help myself?

The main thing is to plan carefully. Don't just take random painkillers. Many people cope well without seeing a health professional. First step could be your local pharmacist; next, your GP. Only a minority of people with migraine have to see a headache specialist.

Keep a diary

The more you're bothered by migraine, the more important it is to keep a record of attacks of headache and other migraine symptoms, including also possible triggers (e.g. menstrual cycle; shiftwork pattern) and treatments together with response.

What treatment can I take?

Drugs can be very effective at controlling migraine symptoms – if it's the right drug at the right time!

Acute treatment can be with painkillers or triptans. Not all painkillers work well for migraine: most find aspirin or ibuprofen better than paracetamol or codeine. Triptans are not painkillers but usually work well for migraine, because they mimic serotonin: sumatriptan is available without prescription. Other useful drugs include stronger versions of ibuprofen, called non-steroidal anti-inflammatory drugs (NSAIDs), and anti-sickness drugs.

Migraine needs early acute treatment: there is a "window of opportunity" that can take some time and experimentation to establish, for each patient. Sometimes aspirin or NSAIDs work well at prodrome or aura, but triptan use may need to wait until headache begins. When you know what works for you, always keep a small supply with you.

During a migraine attack the stomach can stop working, so drugs are not well absorbed. Ways around this include using large doses of drugs (e.g. aspirin 900mg or ibuprofen 600mg), dissolving the drug in water (some recommend a fizzy drink) and adding an anti-sickness drug that also promotes the normal emptying of the stomach, such as domperidone 20mg (available without prescription as Motilium). The combination of a triptan, plus domperidone, plus either aspirin or ibuprofen, all taken together at the start of an attack, can be

better than the same drugs used one after the other over a few hours. Another way to avoid poor drug absorption (or vomiting of drugs) is to use suppositories.

Frequent attacks, or poor response to acute treatment, may lead to treatment every day with a preventative drug. These mostly work on serotonin, which needs gradual change, so take a few months to work. It is often difficult to identify benefit or failure, unless there is a migraine diary. Preventative drugs usually have only a partial benefit: no-one has yet found a way of guaranteeing freedom from migraine.

Usually it is best to start with acute treatment, keep a diary, address triggers, then later think about a preventative drug.

What if drugs don't work?

Don't take drugs that don't work. If your migraine is going from bad to worse it is often important to stop taking acute treatments for a while. This is hard to do if you have a busy life. The single commonest reason for worsening migraine, moving from acute to chronic pain, is the overuse of acute treatments. This is a big problem for people who take random painkillers, particularly combinations of codeine and paracetamol, though any acute migraine treatment can do this. When you're in a hole, stop digging!

Will it get better?

Yes. Almost everyone finds that migraine improves naturally with time. While waiting for this to happen, migraine can be controlled, treated, and managed – but not, in the strictest sense, cured.

Think about triggers and how to avoid them; avoid traps such as medication overuse or the wrong sort of contraceptive pill; keep a diary, consider a preventative; consult your pharmacist and GP: if they can't help, consider seeing a specialist.

This information is provided as a general guide only. If you have any queries or concerns about your headaches or medications please discuss them with your GP or your National Migraine Centre Doctor.