Migraine and stroke
What is a stroke?
A stroke occurs when part of your brain is deprived of its blood supply. There are two main types of stroke, ischaemic stroke is suggested to have a link with certain types of migraine; ischaemic means a reduced blood and oxygen supply sometimes due to a clot. The other type of stroke is a haemorrhagic stroke, which is where a damaged or weakened artery bleeds into nearby tissue. This type of stroke is not linked with migraine.

Migraine and stroke
Studies have shown that people who suffer from migraines, with or without aura, are more likely to develop heart disease and strokes. In one research trial Icelandic researchers looked at 18,725 people who had been asked about whether they suffered from migraines and followed them for up to 40 years. They found that those who had migraine with aura were 27% more likely than those without migraines to die from cardiovascular disease, which includes both heart disease and strokes. Those with the condition were 28% more likely to die from coronary heart disease, and 40% more likely to die of a stroke. Suffering from normal migraine also increased the risk of stroke compared to those who did not suffer at all from them, but by a lesser degree. [1].

Further studies conducted in the US have shown that women suffering from migraine with aura might be more of a risk factor for haemorrhagic stroke. This study looked at 27,860 women who had migraine and followed them on average for 13 years. They found that women who had migraine with aura had only a slight risk increase than those without migraines of dying from haemorrhagic stroke. This study also concluded that women who had migraine without aura had no increased risk of haemorrhagic stroke. [2].

Migraine affects three times the number of women than men. The incidence of stroke in men is twice that of women. Other studies have shown that the risk of stroke was increased in women aged 35 to 45 years old who had migraine with or without aura and was exacerbated by oral contraceptive use, smoking and high blood pressure. [3].

The difference in research results could be put down to the different population samples (Iceland and USA) and different lifestyles could also play a part in the differing results.
It’s important to contextualise these research findings as migraine does not result in strokes in most people. There are rare exceptions where people do go on to develop a stroke, but that’s an exception rather than a rule. For example, if the average stroke risk in a woman is 9 out of 100,000 and migraine doubles the risk, the chance of stroke becomes 18 out of 100,000. This is still a very low absolute risk.

Young women who experience bouts of prolonged aura (more than an hour) should also consider alternative birth control to the contraceptive pill containing oestrogen. Non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, will help to relieve pain and reduce inflammation if taken at the onset of the headache. [4.]

FAQs

Is there a risk of stroke during a migraine attack? Understandably, some people are afraid that their migraine is a symptom of a stroke and others worry that they are more at risk of a stroke during a migraine attack. There is little evidence to suggest that a stroke is more likely to occur during a migraine attack than at another time. In some people migraine and stroke appear together but the nature of the causal relationship, if any, is difficult to establish firmly. Migrainous infarction is the term given to an ischaemic stroke occurring during a migraine attack and is extremely rare.

In this condition aura symptoms are prolonged, and ischaemic stroke is confirmed by being shown in a brain scan. However, research suggests that such a stroke would be independent of the migraine attack. It is also possible for a person to have a stroke but for this to have been mistaken for a migraine attack. The migraine aura can mimic transient ischaemic attacks (TIAs). Conversely, in stroke, headache similar to migraine may occur.

What is migraine aura?

Migraine aura, also referred to as “classical migraine” is the collective name given to several types of neurological symptoms; they last between 15 minutes and an hour before you get an actual headache. These disturbances are usually visual, such as blind spots, flashing lights, or zigzag patterns in your vision. They can also include tingling, pins and needles or numbness in the limbs or problems with coordination and articulation. For further information about migraine with aura, please visit www.migraine.org.uk/aura.
I suffer from hemiplegic migraine, does this mean I have a stroke every time I have an attack?
Hemiplegic migraine is a rare condition which has been linked to a genetic abnormality and it is becoming more readily diagnosed by the medical profession in the UK. Symptoms include temporary weakness / paralysis down one side of the body, which usually lasts between 5 minutes and 1 day but can last for several days. Hemiplegic migraine is often associated with a severe headache. This form of migraine may be confused with a stroke, but the effects are usually fully reversible and there are specific treatments available.

Hemiplegic migraine does not result in strokes in most people and after a few attacks people realise that it’s not a stroke. It is still frightening and unpleasant but usually it’s not life threatening. For further information about hemiplegic migraine, please visit www.migraine.org.uk/hemiplegicmigraine.

Important: if during an attack you display stroke-like symptoms, you should call 999 for an ambulance immediately if you’re at all worried.

You can also reduce your risk of heart disease in the future by avoiding smoking, regularly exercising and eating a balanced diet.

For further information, advice on migraine management and for updates on the latest migraine research, please contact Migraine Action by calling 0116 275 8317, emailing info@migraine.org.uk, or visiting the charity’s website at www.migraine.org.uk. All of our information resources and more are only made possible through donations and by people becoming members of Migraine Action. Visit www.migraine.org.uk/donate to support one of our projects or visit www.migraine.org.uk/join to become a member.

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References