

Migraine linked to increased risk of cardiovascular problems

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Migraine is associated with increased risks of cardiovascular problems (conditions affecting the heart and blood vessels) including heart attacks, stroke, blood clots and an irregular heart rate, say researchers in a study published by *The BMJ* today.

Although the absolute risks were low, the findings suggest that "migraine should be considered a potent and persistent risk factor for most cardiovascular diseases in both men and women," say the authors.

Around one billion people worldwide are affected by migraine. It has considerable impact on quality of life and imposes a substantial burden on society.

Previous studies have suggested a link between migraine and stroke and [heart](#) attacks, particularly among women, but the link between migraine and other heart problems are less well known.

In a bid to rectify this, researchers from Aarhus University Hospital, Denmark and Stanford University, USA set out to examine the risks of heart conditions including heart attacks; stroke; [peripheral artery disease](#) (narrow arteries which reduce blood flow to limbs); blood clots and fast and irregular heart rates in people who experience migraines compared with people who don't.

The researchers collected patient data from the Danish National Patient Registry over a 19 year period, from 1995 to 2013.

They compared data from over 51,000 people who had been diagnosed with migraine with over 510,000 people who were migraine free. For each person with migraine, they matched 10 people of the same age and gender who were migraine free.

The average age for migraine diagnosis was 35 years, and 71% of participants were women.

Over a period of 19 years, the researchers found that migraine was positively associated with heart attack, stroke, blood clots and irregular heart rate.

For example, for every 1,000 [patients](#), 25 patients with migraine had a [heart attack](#) compared with 17 migraine free patients and 45 patients with migraine had an ischaemic stroke (blood clot in the brain) compared with 25 migraine free patients.

These associations persisted after taking account of body mass index and smoking. No meaningful association was found with peripheral artery disease or heart failure.

The associations, particularly for stroke, were stronger in the first year of diagnosis than the long term, in patients with migraine aura (warning signs before a migraine, such as seeing flashing lights) than in those without aura, and in women than in men.

This is an observational study, so no firm conclusions can be drawn about cause and effect, and the authors cannot rule out the possibility that other unknown factors, such as physical activity, may have influenced the results. However, key strengths include the large sample size and long term follow up.

The authors outline reasons why migraine might increase [cardiovascular disease risk](#). For example, people with migraine often use anti-inflammatory drugs, which are associated with increased risks of heart problems, while immobilisation related to [migraine attacks](#) may increase the risk of [blood clots](#).

They note that current guidelines do not recommend use of anti-clotting drugs such as aspirin to treat migraine, but call on clinicians to "consider whether patients at particularly high risk of heart disease would benefit from anticoagulant treatment".

"Migraine should be considered a potent and persistent risk factor for most cardiovascular diseases" they say. "Ultimately, it will be important to determine whether prevention strategies in patients with migraine can reduce the burden of cardiovascular disease" they conclude.

"We now have plenty of evidence that migraine should be taken seriously as a strong cardiovascular risk marker" but "action to reduce risk is long overdue," argue Professor Tobias Kurth and colleagues in a linked editorial. "Unfortunately, funding for migraine research has been seriously neglected," they say, and they call on public research agencies to "act quickly by investing in prospective studies to accomplish this goal."

More information: Migraine and risk of cardiovascular diseases: Danish population based matched cohort study

www.bmj.com/content/360/bmj.k96

Editorial: Migraine and risk of cardiovascular disease www.bmj.com/content/360/bmj.k275

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