

Migraine may double risk of heart attack

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Migraine sufferers are twice as likely to have heart attacks as people without migraine, according to a new study by researchers at Albert Einstein College of Medicine of Yeshiva University. The study, published in the February 10 online issue of *Neurology*, found that migraine sufferers also face increased risk for stroke and were more likely to have key risk factors for cardiovascular disease, including diabetes, high blood pressure and high cholesterol.

"[Migraine](#) has been viewed as a painful condition that affects quality of life, but not as a threat to people's overall health," said lead investigator Richard B. Lipton, M.D., senior author of the study and professor and vice chair in The Saul R. Korey Department of Neurology at Einstein. He also directs the Headache Center at Montefiore Medical Center, the University Hospital and Academic Medical Center for Einstein.

Dr. Lipton added, "Our study suggests that migraine is not an isolated disorder and that, when caring for people with migraine, we should also be attentive to detecting and treating their cardiovascular risk factors."

More than 29 million Americans suffer from migraine, according to the National Headache Foundation. There are two major forms, migraine without aura and migraine with aura. Both forms involve pulsing or throbbing pain, pain on one side of the head, nausea or vomiting, or sensitivity to light or sound. Migraine with aura has additional neurological symptoms including flashing lights, zig-zag lines, or a graying out of vision. Migraine is most common between the ages of 25 and 55; women are affected three times more frequently than men.

Previous population studies found that migraine with aura is associated with heart disease and stroke, particularly in health care professionals over the age of 45. The Einstein study showed that both migraine with aura and migraine without aura are risk factors for heart disease and stroke in a broadly representative sample of the U.S. population, including people from all walks of life between the ages of 18 and 80.

In the study, the researchers analyzed data on 6,102 people with migraine and 5,243 people without migraine. Participants completed questionnaires that asked about general health; headache frequency, severity and symptoms; and a broad range of medically diagnosed cardiovascular symptoms and events. Data was collected as part of The American Migraine Prevalence and Prevention Study, a longitudinal, population-based study of U.S. headache sufferers.

Results showed that migraine sufferers were about twice as likely to have had a heart attack compared with people without migraine (4.1 percent of people with migraine compared with 1.9 percent of those without migraine). The heart-attack risk was higher for those whose migraine is accompanied by aura: a three-fold greater risk compared with people who didn't suffer migraine.

The data also shows that people with migraine were about 50 percent more likely than controls to have diabetes, hypertension, and elevated cholesterol, all well-known cardiovascular risk factors. The study found that these risk factors may contribute - but do not fully explain - the increased risk of heart attack and stroke in persons with migraine. This finding, according to an editorial accompanying the study, suggests a possible mechanism linking migraine headaches and cardiovascular events: the functioning of the inner layer of blood vessels, known as the endothelium, might be compromised in vessels both inside and outside the brains of migraine sufferers.

"Migraine sufferers should not be alarmed by our findings," said Dr. Lipton. "While we found an increased risk for cardiovascular problems, the percentage of people actually affected remains small. Overall, for example, only 4.1 percent of migraine sufferers had heart attacks. And while the risk of stroke was 60 percent higher for migraine sufferers than for the rest of the population, the percentage of migraine sufferers experiencing strokes was still quite low - 2 percent."

The main message of the study, said Dr. Lipton, is that migraine patients and their doctors should be particularly attentive to identifying and managing [cardiovascular risk factors](#), such as [high blood pressure](#), high cholesterol, obesity, and diabetes.

"We hope these findings will motivate migraine sufferers to exercise regularly, to avoid smoking and to address their other health problems," said Dawn Buse, Ph.D., assistant professor in The Saul R. Korey Department of Neurology and co-author of the study. "It is important to view migraine as more than a series of individual attacks. We need to think about migraine as a chronic disorder with episodic attacks - and between those attacks, migraine sufferers have an enduring predisposition to cardiovascular events. In that sense, migraine has a lot in common with conditions like asthma, where sufferers seem fine between attacks, but there is more going on beneath the surface."

In follow-up studies, Dr. Lipton and his colleagues aim to assess the importance of headache frequency and severity, aura frequency, and other factors influencing cardiovascular risk. They also hope to assess whether effective migraine treatment reduces that risk.

Provided by Albert Einstein College of Medicine

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