

Beware, asthma sufferers: Migraines may worsen

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Credit: Sasha Wolff/Wikipedia

Pre-existing asthma may be a strong predictor of future chronic migraine attacks in individuals experiencing occasional migraine headaches,

according to researchers from the University of Cincinnati (UC), Montefiore Headache Center, Albert Einstein College of Medicine and Vedanta Research.

The findings were published online in November in the journal *Headache*, a publication of the American Headache Society.

"If you have asthma along with episodic or occasional migraine, then your headaches are more likely to evolve into a more disabling form known as chronic migraine," explains Vincent Martin, MD, professor of medicine in UC's Division of General Internal Medicine, co-director of the Headache and Facial Pain Program at the UC Neuroscience Institute and lead author in the study.

Martin teamed with Richard Lipton, MD, and Dawn Buse, PhD, both of Montefiore Headache Center and the Albert Einstein College of Medicine, and Kristina Fanning, PhD, Daniel Serrano, PhD, and Michael Reed, PhD, all from Vedanta Research, to study about 4,500 individuals who experienced episodic migraine or fewer than 15 headaches per month in 2008.

"Migraine and asthma are disorders that involve inflammation and activation of smooth muscle either in blood vessels or in the airways," says Lipton, director of Montefiore Headache Center, vice chair of neurology and the Edwin S. Lowe Chair in Neurology, Albert Einstein College of Medicine, and founder of the American Migraine Prevalence and Prevention Study. "Therefore, asthma-related inflammation may lead to migraine progression."

About 12 percent of the U.S. population experiences migraine, which is almost three times more common in women than in men, according to Martin. Individuals with chronic migraine have headaches 15 or more days per month; this affects about 1 percent of the U.S. population and

takes a severe toll on sufferers who often miss work and social events.

Asthma affects about 8 percent of American adults, according to the U.S. Centers for Disease Control and Prevention.

The researchers analyzed data from the American Migraine Prevalence and Prevention (AMPP) Study. Study participants completed written questionnaires both in 2008 and 2009. Based on responses to the 2008 questionnaire, they were divided into two groups—one with episodic migraine and coexisting asthma and another with episodic migraine and no asthma. They were also asked about medication usage, depression and smoking status. The 2008 and 2009 questionnaires included questions about their frequency of headache, which enabled the authors to identify the participants who had progressed to chronic migraine.

Researchers found that after one year of follow-up, new onset chronic migraine developed in 5.4 percent of participants also suffering from asthma and in 2.5 percent of individuals without asthma. "In this study, persons with episodic migraine and asthma at baseline were more than twice as likely to develop chronic migraine after one year of follow-up as compared to those with episodic migraine but not asthma," says Martin.

"The strength of the relationship is robust; asthma was a stronger predictor of chronic migraine than depression, which other studies have found to be one of the most potent conditions associated with the future development of chronic migraine," explains Martin.

Researchers have considered various theories as to why asthma may have a predictive role in chronic migraine development for individuals with episodic or occasional migraine. Asthmatic patients are more likely to also have allergies and the researchers have shown in prior studies that patients with allergies might be prone to more frequent headaches

particularly if they have hay fever, explains Martin.

Another possibility is that patients with asthma may have an overactive parasympathetic nervous system that predisposes them to attacks of both migraine and asthma, says Martin. It's also possible that asthma may not directly cause chronic migraine, but that a shared environmental or genetic factor, like air pollution, which has been known to trigger both [asthma](#) and migraine attacks may play a role, he explains.

So what does someone suffering from occasional migraine do to avoid [chronic migraine](#)? Martin says physicians may want to prescribe preventive medications for migraine at an earlier stage in these patients.

"Also, if allergies are the trigger it begs the question should we treat allergies more aggressively in these patients?" says Martin.

Provided by University of Cincinnati Academic Health Center

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