

# Migraine attacks increase following stress 'let-down'

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Migraine sufferers who experienced reduced stress from one day to the next are at significantly increased risk of migraine onset on the subsequent day, according to a new study conducted by researchers at the Montefiore Headache Center and Albert Einstein College of Medicine at Yeshiva University. Stress has long been believed to be a common headache trigger. In this study, researchers found that relaxation following heightened stress was an even more significant trigger for migraine attacks. Findings may aid in recommending preventive treatments and behavioral interventions. The study was published online today in *Neurology*, the medical journal of the American Academy of Neurology.

Migraine is a chronic condition that affects approximately 38 million Americans. To examine headache triggers, investigators at the Montefiore Headache Center and Einstein conducted a three month electronic daily diary study which captured 2,011 diary records and 110 eligible [migraine](#) attacks in 17 participants. The study compared levels of [stress](#) and reduction in stress as predictors of headache.

"This study demonstrates a striking association between reduction in perceived stress and the occurrence of [migraine headaches](#)," said study lead author Richard B. Lipton, M.D., director, Montefiore Headache Center, professor and vice chair of neurology and the Edwin S. Lowe Chair in Neurology, Einstein. "Results were strongest during the first six hours where decline in stress was associated with a nearly five-fold increased risk of migraine onset. The hormone cortisol, which rises

during times of stress and reduces pain, may contribute to the triggering of headache during periods of relaxation."

Data were collected using a custom-programmed electronic diary. Each day participants recorded information about [migraine attacks](#), two types of stress ratings and common migraine triggers, such as hours of sleep, certain foods, drinks and alcohol consumed, and menstrual cycle. They also recorded their mood each day, including feeling happy, sad, relaxed, nervous, lively and bored.

"This study highlights the importance of stress management and healthy lifestyle habits for people who live with migraine," said Dawn C. Buse, Ph.D., director, Behavioral Medicine, Montefiore Headache Center, associate professor, Clinical Neurology, Einstein, and study co-author.

"It is important for people to be aware of rising [stress levels](#) and attempt to relax during periods of stress rather than allowing a major build up to occur. This could include exercising or attending a yoga class or may be as simple as taking a walk or focusing on one's breath for a few minutes."

Provided by Albert Einstein College of Medicine

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