Predictive model may help forecast migraine attacks

July 12 2017

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A new model based on measuring stress from daily hassles may help forecast future migraine headache attacks in those who develop them frequently. The findings, which are published in a *Headache* study,

suggest that it may be possible to predict the occurrence of tomorrow's migraine attack based on today's stress.

"We know that certain people are at greater risk of having an attack over other people, but within a person, we have not been able to predict increased risk for an attack with any level of accuracy," said lead author Tim Houle, PhD, of Massachusetts General Hospital. "This study demonstrates that it is quite possible to forecast the occurrence of a headache attack within an individual headache sufferer."

In the study by Dr. Houle and his colleagues, which included 95 individuals with 4195 days of diary data, participants experienced a headache attack on 1613 (38.5%) days. A simple forecasting model using either the frequency of stressful events or the perceived intensity of these events had promising predictive value. While the participants reported low to moderate levels of stress overall, stress was greater on days preceding a headache.

With refinement, the model has the potential to allow for preemptive treatment of migraine attacks when someone is at greatest risk, thereby avoiding pain and disability.

"The model we developed in this study is a very good start to helping people forecast the chances they will experience a headache attack, but work is needed to make the prediction models more accurate before they will be of widespread clinical use," said Dr. Houle.

In an accompanying editorial, experts noted that to realize the potential of preventive therapies, "we must refine the art of headache forecasting and then test targeted interventions in carefully selected patients."

More information: *Headache* (2017). DOI: 10.1111/head.13137/full

Provided by Wiley