Got Migraines? Blame Faulty Genes

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A faulty gene may be giving you a headache. Literally. A gene that influences a pain-regulating protein in the brain is the common cause for migraines, according to research published in *Nature Medicine*, Medical News Today reported.

Migraines are severe and long-lasting headaches that may begin as throbbing pain on one side or the front of the head. The pain can cause visual disturbances, called “auras,” such as blind spots, zigzag lines, flashing lights and hallucinations, as well as tingling of the arms or legs.

For the study, researchers from the University of Montreal and the University of Oxford compared the DNA of people who suffered from migraines with those who didn’t. Scientists found that a large family of migraine sufferers carried a mutation in a gene (specifically, it’s the KCNK18 gene) that inhibits the function of a protein called TRESK. This protein helps regulate the sensitivity threshold of pain centers in the brain.

The gene mutation causes incomplete production of the TRESK protein, interrupting normal brain function and altering electrical activity in the nerve cells.

Researchers also discovered that the protein is present in some brain cell structures previously linked to migraine and pain pathways.

“We now have direct evidence that migraine is a nerve excitability problem and have highlighted a key causal pathway in migraine,” said Zameel Cader, PhD, a study coauthor from the MRC Functional Genomics Unit at the University of Oxford in the United Kingdom.

Researchers hope this discovery will help create new therapies to fight migraines and improve the quality of life for migraine sufferers.

Globally, the condition affects one in five women and one in 10 men and is also rated as the leading cause of disability worldwide.

“We have now made a major step forward in our understanding of why people suffer with migraine and how, in certain cases, your family can literally give you a headache!” Cader said.

Click here to learn how migraines may signal other health problems.

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