

What a headache: Genetic adaptation to cold weather also gave us migraines

A human genetic variant in a gene involved in sensing cold temperatures became more common when early humans migrated out of Africa into colder climates between 20,000 and 30,000 years ago, a study published [May 3] in [PLOS Genetics](#) shows. The advantage conferred by this variant isn't definitively known, but the researchers suspect that it influences the gene's expression levels, which in turn affect the degree of cold sensation. The observed pattern of positive selection strongly indicates that the allele was beneficial, but that benefit had a tradeoff—bringing with it a higher risk of getting migraines.

...

Using models of population genetics, the researchers inferred that the cold-adapted allele had already existed in the ancestral African population, and that it became more common as people migrated northward.

...

To find out when selection on this variant occurred, the researchers looked for the SNP in the genomes from ancient remains of hunter gatherers or farmers that lived 3,000–8,000 years ago in Eurasia. It turned out that the allele was already common among these groups at least 3,000 years ago.

The connection between TRPM8 and migraine isn't clear, other than the association. "Selection is optimizing fitness," says anthropologist [John Hawks](#) of the University of Wisconsin-Madison who was not associated with the study. "It doesn't optimize health, it doesn't optimize happiness, so sometimes things are pushed by selection and they have negative side effects."

Read full, original post: [Genetic Adaptation to Cold Brought Migraines With It](#)