

Low tolerance for pain? The reason may be in your genes

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Researchers may have identified key genes linked to why some people have a higher tolerance for pain than others, according to a study released today that will be presented at the American Academy of Neurology's 66th Annual Meeting in Philadelphia, April 26 to May 3, 2014.

"Our study is quite significant because it provides an objective way to understand [pain](#) and why different individuals have different pain tolerance levels," said study author Tobore Onojjighofia, MD, MPH, with Proove Biosciences and a member of the American Academy of Neurology. "Identifying whether a person has these four genes could help doctors better understand a patient's perception of pain."

Researchers evaluated 2,721 people diagnosed with [chronic pain](#) for certain genes. Participants were taking prescription opioid pain medications. The genes involved were COMT, DRD2, DRD1 and OPRK1. The participants also rated their perception of pain on a scale from zero to 10. People who rated their pain as zero were not included in the study. Low [pain perception](#) was defined as a score of one, two or three; [moderate pain](#) perception was a score of four, five or six; and high pain perception was a score of seven, eight, nine or 10.

Nine percent of the participants had low pain perception, 46 percent had moderate pain perception and 45 percent had high pain perception.

The researchers found that the DRD1 gene variant was 33 percent more

prevalent in the low pain group than in the high pain group. Among people with a moderate pain perception, the COMT and OPRK variants were 25 percent and 19 percent more often found than in those with a high pain perception. The DRD2 variant was 25 percent more common among those with a high pain perception compared to people with moderate pain.

"Chronic pain can affect every other part of life," said Onojjighofia. "Finding [genes](#) that may be play a role in pain perception could provide a target for developing new therapies and help physicians better understand their patients' perceptions of pain."

Provided by American Academy of Neurology

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