

Study shows association between migraine and carpal tunnel syndrome

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Patients with carpal tunnel syndrome are more than twice as likely to have migraine headaches, reports a study in *Plastic and Reconstructive Surgery—Global Open*, the official open-access medical journal of the American Society of Plastic Surgeons (ASPS).

The association also runs in the other direction, with migraine patients having higher odds of carpal [tunnel syndrome](#), according to research by Dr. Huay-Zong Law and colleagues of University of Texas Southwestern Medical Center at Dallas. The findings add a new piece of evidence in the ongoing debate over the use of nerve decompression surgery as a treatment for migraine headaches.

Association between Carpal Tunnel Syndrome and Migraine

The researchers analyzed data from nearly 26,000 Americans responding to a national health survey. Among other questions, participants were asked whether they had had carpal tunnel syndrome during the past year or "severe headache or migraine" during the past three months. Patients with carpal tunnel syndrome have symptoms such as hand numbness and weakness, resulting from pressure on the median nerve in the wrist.

Based on these definitions, 3.7 percent of respondents had carpal tunnel syndrome and 16.3 percent had migraine headache. Associations between these two conditions were analyzed, with adjustment for

patient- and health-related risk factors.

The results suggested that people with migraine were more likely to have [carpal tunnel syndrome](#), and vice versa. Migraine was present in 34 percent of respondents with CTS, compared to 16 percent of those without CTS. After adjustment for other factors, the odds of having migraine were 2.6 times higher for those with CTS.

Carpal tunnel syndrome was present in eight percent of participants with migraine versus three percent of those without migraine. On adjusted analysis, the odds of having CTS were about 2.7 times higher for those with migraine.

The two conditions had some shared risk factors—especially female sex, obesity, diabetes, and smoking. Carpal tunnel syndrome was associated with older age and migraine with younger age. Both conditions were less common in Asians, and CTS was less common in Hispanics. The associations between CTS and migraine were independent of all of these factors.

Could Migraine Indicate Higher Future Risk of CTS?

Both CTS and migraines are common conditions with high costs and disability. The contributing causes of both conditions are "poorly understood." Carpal tunnel syndrome is the most common of a group of related conditions called compression neuropathies, with symptoms related to pressure on nerves.

Historically, migraine has not been considered to be a compression neuropathy. Dr. Law and colleagues write, "Recently, however, there is some evidence that [migraine headache](#) may be triggered by nerve compression in the head and neck, with some patients responding to nerve decompression by surgical release."

Some studies have reported improvement in migraine headaches after surgery to relieve pressure on nerves at specific migraine "trigger points." However, this concept remains "controversial" and "heavily debated," according to the authors.

The new study is the first to show an association between CTS and migraine. The nature of the connection remains unclear—the two conditions may share some "common systemic or neurologic risk factor," the researchers write.

Noting that migraine tends to occur at younger ages and CTS at older ages, Dr. Law and coauthors call for further studies to determine whether [migraine](#) headache may be an "early indicator" of patients who are more likely to develop CTS in the future. If so, such a connection "would allow for earlier diagnosis and treatment, or even prevention, of CTS by modification of risk factors," they conclude.

More information: "An Association between Carpal Tunnel Syndrome and Migraine Headaches-National Health Interview Survey, 2010." [DOI: 10.1097/GOX.0000000000000257](https://doi.org/10.1097/GOX.0000000000000257)

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