When the following study linked migraines to Parkinson’s disease, we knew from previous work with outcomes when gasotransmitter imbalances existed; migraines were linked to nitric oxide imbalances and so was Parkinson’s.

While correlation does not prove causation in science, the overwhelming number of studies linking nitric oxide to both migraines and Parkinson’s cannot be ignored.

The two documents affixed to this article provide ten examples each of the hundreds that exist for nitric oxide as a causal factor for migraines as well as Parkinson’s diseases.

Summary

Can neuroscientists dismiss the facts or has research validated the links between nitric oxide levels and these two conditions?

http://www.medpagetoday.com/Neurology/Migraines/56133?xid=nl_mpt_DHE_2016-02-12&eun=g407160d0r

Migraines Linked to Parkinson's Risk

Longitudinal Taiwanese cohort study finds link between migraines and Parkinson's disease

by Sydney Lupkin
Reporter, VICE News/MedPage Today

People who have migraines may be more likely to develop Parkinson's disease, according to a Taiwanese study.

In a longitudinal follow-up cohort study, having two migraine diagnoses in 1 year was associated with a greater risk of developing Parkinson's disease over about 3 years (HR 1.64, \( P=0.0004 \)), Shin-Liang Pan, MD, PhD, of the
National Taiwan University Hospital, and colleagues reported online in the journal *Cephalalgia*.

The researchers included Taiwanese subjects between the ages of 40 and 90 who were diagnosed with migraines in at least two ambulatory care visits in 2001 but had not been diagnosed with Parkinson's disease or secondary Parkinsonism the year before. They were then score-matched to patients without migraine diagnoses in 2001 based on sex, age, comorbidity, and socioeconomic data using a two-stage propensity score. Once patients were matched, there were 41,019 people in each group.

During the median 32-month follow-up, 148 patients in the migraine group and 101 patients in the nonmigraine group were diagnosed with Parkinson's disease, suggesting a statistically significant increase in Parkinson's risk for those with migraine.

"These findings may highlight the importance of early risk assessment for Parkinson's disease in migraineurs," Pan told MedPage Today, adding that the study still had its limitations. "Future longitudinal studies with neuroimaging and neurologic examinations are needed in order to elucidate the relationship and the underlying pathophysiological mechanism between migraine and Parkinson's disease."

Although the reason for the increased risk of Parkinson's disease among patients in the migraine group is unclear, the authors listed several suggestions. One could be that both migraines and Parkinson's disease are the result of serotonergic and dopaminergic system dysfunction. They also suggest both ailments could arise from dysfunctional iron metabolism in the brain.
Since the median follow-up time was only 32 months, the authors couldn't determine the long-term effects of migraines on the risk of Parkinson's disease, they wrote in the study.
And because most older migraine patients don't present for care, it's possible the study missed migraine patients in the migraine group and unintentionally included them in the nonmigraine group, said Mia Minen, MD, director of headache services at NYU Langone Medical Center, who was not involved in the study. She added that she wasn't familiar with health insurance data in Taiwan, but in the U.S., migraines are often coded as headaches instead.

Pan and colleagues noted that the study was also limited by the fact that it relied on codes in the Taiwanese National Health Insurance claims database for diagnostic data, although these data are audited to ensure validity.

These data also lacked lifestyle information, such as smoking, alcohol intake, and obesity, which could have influenced findings, they wrote.

"Since this study is an observational study, it is subject to confounding effects arising from imbalance in clinical characteristics between patients with and without migraine," Pan said, explaining that the study's design attempted to make up for this weakness. "This matching procedure required a lot of sampling and computation in the large scale database."

The authors added that their work was also limited by possible ascertainment bias because both migraine and Parkinson's disease are neurological.

Still, Minen said the study's biggest strength is its size, adding that it's "interesting" and can pave the way for future studies.

Pan said a good follow-up study would be to examine how having migraines effects the risk of developing Alzheimer's disease.
The study authors declared no conflicts of interest. The study was funded by the Department of Health, Executive Yuan, Republic of China.

Reviewed by F. Perry Wilson, MD, MSCE Assistant Professor, Section of Nephrology, Yale School of Medicine

Primary Source
Cephalalgia


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Migraine Headaches and Nitric Oxide

On February 13, 2016; the following ten links were extracted from Google.com. It should be noted that an additional large number of studies establish the link but no scientific hypothesis is elucidated. "Science is wonderfully equipped to answer the question 'How?' but it gets terribly confused when you ask the question 'Why'?” Erwin Chargaff (1895-2002)

We assert that the **WHY** issue is attributable to synaptic activity; i.e. NO opens the synapse. With the gap being opened too much, connectivity of neurotransmitters can be inadequate and, conversely, if the gap is too narrow, connectivity can also present a problem. Technically, the properties of biphasic activity are being overlooked.

http://www.mcfip.net/upload/Biphasic%20(Yin%20-%20Yang)%20Cellular%20Activity%20x.pdf

With near certainty, the mechanism of shear stress is the underlying factor for stimulating the release of NO from endothelial cells that line the vasculature.

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Parkinson’s Disease and Nitric Oxide

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http://www.parkinsons.org.uk/content/targeting-nitric-oxide-tackle-dyskinesia