



2024 INTERVIEW SUMMARY SHEET

SPEAKER

Walter Koroshetz, MD

TITLE & ORGANIZATION

Director
National Institute of Neurological Disorders
and Stroke (NINDS)
National Institutes of Health (USA)

TOPIC

Neurological Research Priorities

KEY TAKEAWAYS

- Scientists understand that migraine involves a type of circuit disorder in the brain. However, they don't understand what causes the disorder nor which brain circuits are involved in causing migraine.
- Migraine is more than just a kind of pattern of headaches. It can manifest as different changes in an individual's body over an extended length of time that may or may not result in a headache.
- Dr. Koroshetz recalls working with "a really fantastic neurologist," C. Miller Fisher, who helped people see that there is no such thing as a regular headache case. In fact, Fisher identified 54 things you need to know to understand headaches.
- NINDS has made big strides in bringing patients into research studies so that the patient's lived experience can inform the scientists' research.
- The BRAIN (Brain Research Through Advancing Innovative Neurotechnologies) Initiative, a program within NINDS, is looking at how the brain is mapped, and how its activity is monitored and modulated. It is being supported by an annual U.S. Congressional appropriation of almost \$600 million.
- The BRAIN Initiative focuses on the development of tools for understanding brain circuits and their disorders, which is key to developing effective treatments for migraine.
- The HEAL (Helping to End Addiction Long-term) Initiative focuses on developing better pain medicines and to understand how to use medicines that alleviate pain while minimizing the risk for addiction.

TREATMENTS CITED

CGRP inhibitors	Opioids
Nonaddictive pain medications	Vagus nerve stimulation

QUOTES

"But I would say that when I started out as a neurologist, the idea was that neurologists really couldn't do anything; they could diagnose but couldn't really treat, and that definitely changed over my career. So, we have seen some real progress, but we're just scraping at the bottom of the barrel right now. We have a lot to do, but we have new tools."

"Because if you can crack migraine and really understand it, I think that ties a lot of the nervous system together; both what's going on in the brain as a tissue in the circuit, how it interacts with other parts of the body, how these cycles occur. There are so many mysteries — if you understood migraine, you'd probably understand a lot of the rules that the brain is working under."

"We know that opioids are really not useful in chronic migraine, but there are people who are taking it as kind of the last resort. And there are also people when you have an acute migraine that will get an opioid for the acute timeframe. But if you have a propensity toward addiction, even the acute exposure could put you at risk of developing an addiction. And the chronic is really a problem, particularly in migraine. So this is really relevant to migraine."

"So the NIH funding for migraine in 2022, which is the last numbers we have, is \$54 million. And as you know, that's not commensurate with the burden of illness due to migraine. And actually, if you look at all the different diseases and the disability they cause, the number of people affected, and the work hours lost, and the time lost; migraine is probably one of the worst in terms of funding."

PRACTICAL STEPS

- Lobby Congress to appropriate funding for migraine research.