

INVESTMENT IN RESEARCH SAVES LIVES AND MONEY

Migraine

Migraine is a disabling disease that causes recurring attacks of head pain associated with a variety of symptoms including nausea, vomiting, dizziness, cognitive impairment, and heightened sensitivity to light, noise, odors, and movement. Research has uncovered several triggers that can lead to these attacks. If left untreated, migraine attacks can last from 4 to 72 hours.¹

TODAY

Migraine is the most debilitating illness in the world in those between 15-49 years of age.²

Migraine is one of the leading causes of outpatient and emergency department visits with

1,094,000 visits in 2016.^{5,6}

In 2015, **20%** of adult women and **9.7%** of adult men reported having a severe headache or migraine attack in the past 3 months.³

Migraine affects women **3 times** more often than men.⁴

Research Delivers Solutions

Existing diagnostic techniques are being evaluated through studies like the **Chronic Migraine Epidemiology and Outcomes (CaMEO)**. The CaMEO study was designed to improve understanding of episodic and chronic migraine, and new techniques, such as a self-administered survey which successfully identifies the occurrence of a migraine attack, are being developed to allow for the **earlier detection and prevention** of migraine.^{10,11}

A 2016 study found that **Onabotulinumtoxin A** can be effective in preventing migraine by blocking the release of chemicals involved in pain transmission.¹² Additionally, research has found that some medications developed originally for diseases such as high blood pressure and epilepsy can be effective in preventing migraine attacks.¹³ In 2019, research efforts resulted in FDA approval for a **new class of drugs** that block a particular molecule which, if left unblocked, can worsen migraine attacks.¹⁴ This is the first new class of drugs specially developed for migraine prevention in more than 50 years.

To help physicians and researchers better understand the causes, characteristics, costs and treatment of migraine, the American Migraine Foundation launched the **American Registry for Migraine Research (ARMR)** and the **International Registry for Migraine Research (IRMR)**.¹⁵ Clinical data are gathered on each patient over time, along with data from brain scans and blood samples. Research using this registry holds unprecedented promise for understanding the disease and identifying new treatments.

COST

The direct and indirect costs of migraine totaled

\$36 billion in 2016.⁷

Migraine interferes with education, career, and social activities for more than

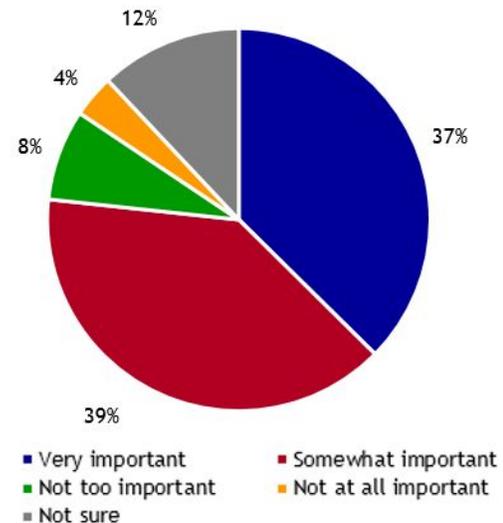
90% of those affected.⁸

More than

157 million

work days are lost each year in the U.S. due to migraine.⁹

How important is it for the federal government to incentivize greater private sector investment in new treatments and cures?



Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2019

Migraine

Then. Now. Imagine.

THEN

In the early 20th century, it was believed that migraine headache was exclusively due to abnormal dilation of blood vessels around the brain.

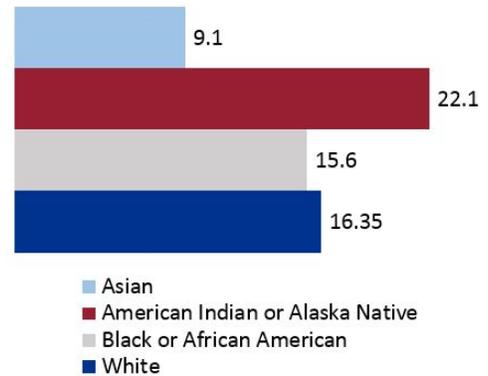
NOW

Researchers have now proven that migraine is a neurological disorder involving the release of chemicals and overactivity of nerve pathways in the brain.

IMAGINE

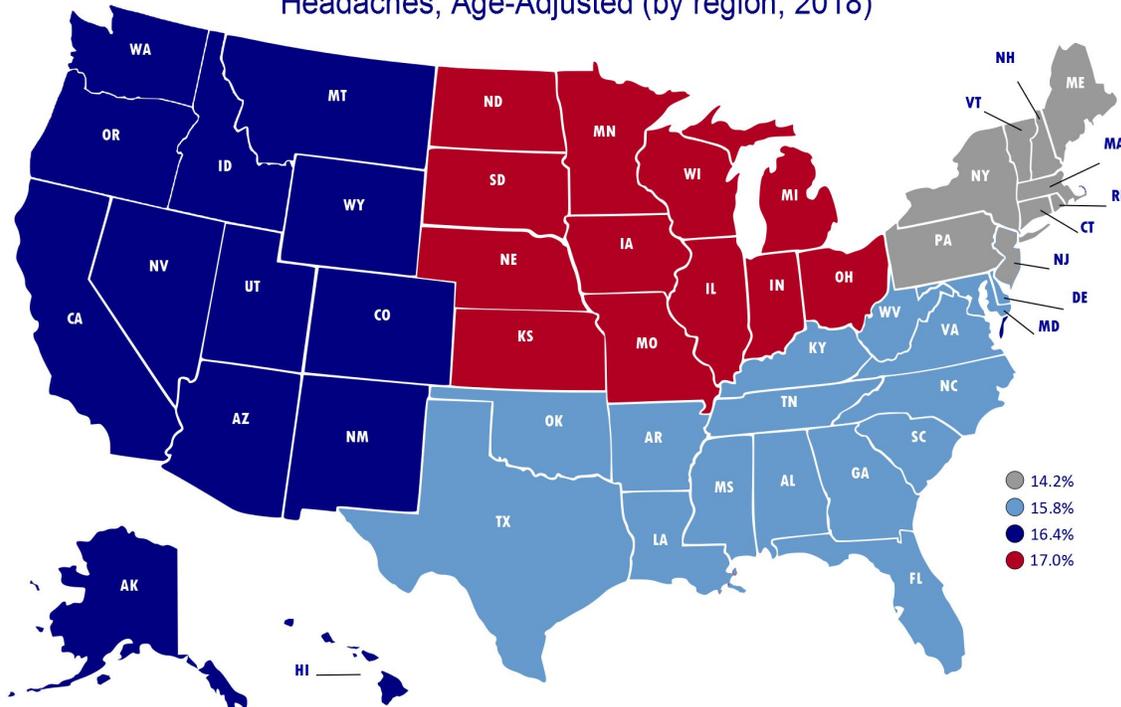
A cure.

American Adults with Migraine Headaches in 2018, by percentage of indicated population



SOURCE: "NCHS, National Health Interview Survey - United States, 2018."

Percentage of American Adults with Migraine Headaches, Age-Adjusted (by region, 2018)



SOURCE: "NCHS, National Health Interview Survey" — United States, 2018. Centers for Disease Control and Prevention.

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