RESEARCH AMERICA
DISCOVERY. INNOVATION. HEALTH.

LASKER FOUNDATION

If you think research is expensive, try disease.

INVESTMENT IN RESEARCH SAVES LIVES AND MONEY

Chronic Pain

There are two types of pain: acute and chronic. Acute pain is usually from an injury and does not last long. Chronic pain can last for weeks, months, or even years. Chronic pain can stem from an injury, infection, or disease such as arthritis or cancer, and sometimes there is no known cause. Environmental and psychological factors such as mental illness or drug use can make chronic pain worse.[1–3] There is also a specific type of chronic pain known as phantom pain which is pain that stems from a missing part of the body.[4] Those with chronic pain may suffer from headaches, back pain, arthritis pain, or pain resulting from nerve damage. Other symptoms include feeling tired, having trouble sleeping, or mood changes, and living with chronic pain can lead to low self-esteem, anger, depression, anxiety, or frustration.[2]

TODAY

50 million U.S. adults have chronic pain.[5]

19.6 million U.S. adults have high-impact chronic pain, or chronic pain that limits at least one major life activity.[5]

One-third of those with high-impact chronic pain have difficulty with self-care activities such as getting dressed.[6]

COST[7]

Up to $635B: The total annual financial cost of pain to the United States

$4,475: The average healthcare costs for a person living with pain

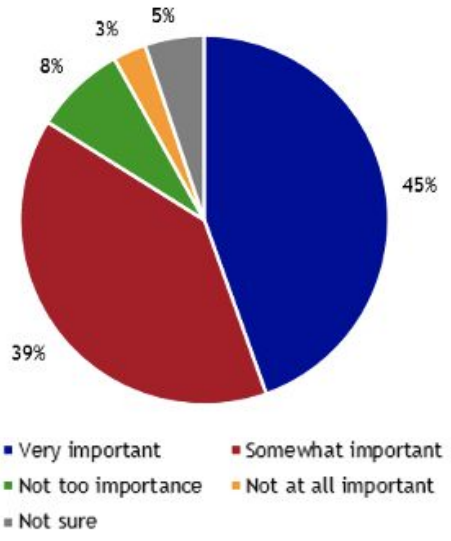
Research Delivers Solutions

One study found that the structure of the brain may predict if a person will suffer from chronic lower back pain. After analyzing brain scans of patients with a single case of back pain as they either recover or continue living with chronic pain, researchers discovered that structural properties of **white matter** in the brain can predict a transition to chronic pain. Understanding this connection can possibly be used to better target therapies for chronic pain.[8]

In a review of over 2,728 patients with pain from nerve damage due to diabetes, researchers found that **duloxetine**, an antidepressant medication, was effective in treating pain in the short term. At certain dosages, duloxetine effectively treated physical pain from diabetes, fibromyalgia, and depression for up to 6 months. This discovery is part of an effort to find treatments for chronic pain that are not opioid-based, reducing the impact and risk of addiction of opioid drugs.[9]

In 2017, a key paper revealed that chronic pain patients given access to a **prerecorded virtual therapist**, a process known as interactive voice response-base cognitive behavioral therapy (IVR-CBT), showed the same improvements in physical functioning, sleep quality, and physical quality of life after 3 months as patients provided in-person cognitive behavioral therapy.[10] This report supports the use of telemedicine as a treatment for chronic pain, facilitating pain care in rural or otherwise distant communities.

How important is it for the President and Congress to assign a high priority to ensuring faster medical progress?



Source: A Research!America poll of U.S. adults conducted in partnership with Zogby Analytics in January 2020

Chronic Pain

Then. Now. Imagine.

THEN
In the 1980s, many specialists believed that opioids had a low risk of addiction, and use of the drugs increased to treat long-term pain.[11]

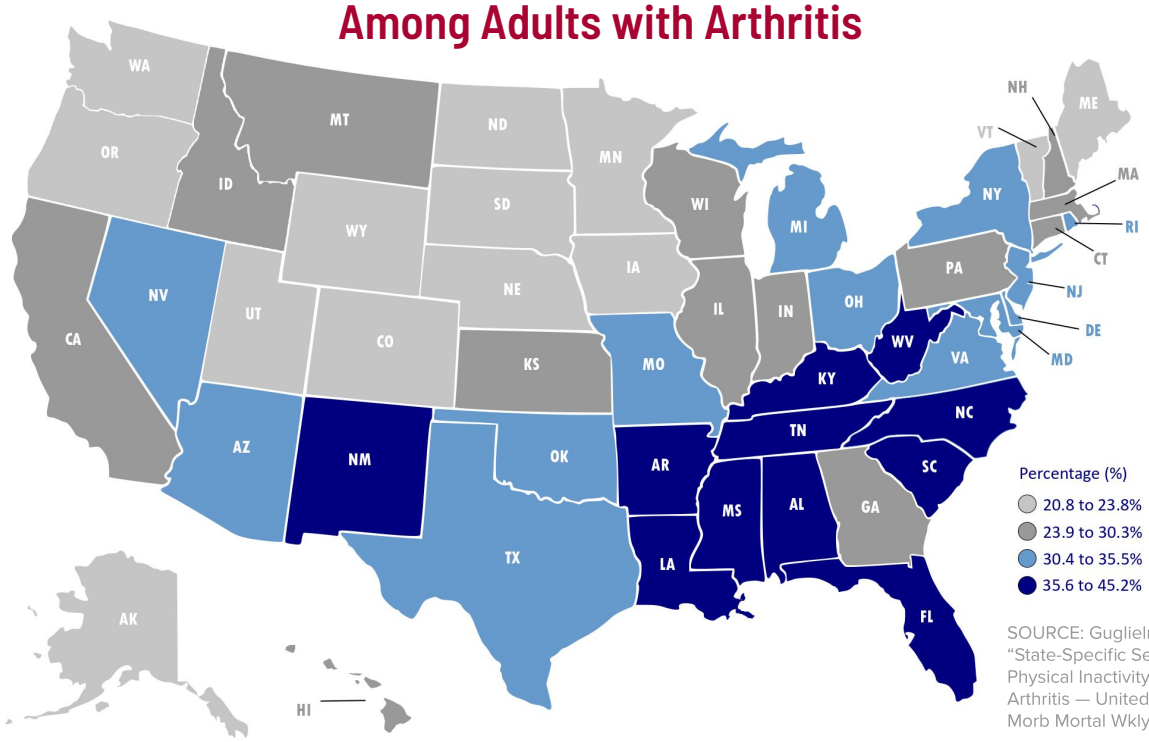
NOW
The drastic rise in opioid prescription rates is propelling the current opioid epidemic.[12]

IMAGINE
More personalized opioid-free pain relief

Opioids for Pain Relief

The prevalence of opioid dependence may be as high as 26% among patients in primary care receiving opioids for chronic pain.[13] However, several studies have shown that using opioids for chronic pain may not be the best way to manage pain. In 2018, a landmark study of 240 patients with chronic back pain revealed that treatment with opioids did not improve pain-related function compared to non-opioid treatment over 12 months.[14] Another study in 2019 from the Veterans Health Administration revealed that non-drug pain therapies such as acupuncture, massage, or exercise, have long-term chronic pain benefits and may be viable alternatives to drug therapies.[15]

Age-Standardized Percentage of Severe Joint Pain by State Among Adults with Arthritis



SOURCE: Guglielmo et al. "State-Specific Severe Joint Pain and Physical Inactivity Among Adults with Arthritis — United States, 2017." MMWR Morb Mortal Wkly Rep 2019;68:381–387.

1. "Chronic Pain." MedlinePlus. 2016.
2. "Chronic Pain." AAFP. 2019.
3. "Psychiatric Aspects of Chronic Pain." Pain and Disability. 1987.
4. "Phantom pain – Symptoms and causes." Mayo Clinic. 2018.
5. Dahlhamer et al. "Prevalence of Chronic Pain and High-Impact Chronic Pain Among Adults — United States, 2016." MMWR Morb Mortal Wkly Rep 2018;67:1001–1006.
6. "Prevalence and Profile of High Impact Chronic Pain." NCCIH. 2018.
7. Gaskin et al. "Relieving pain in America: A blueprint for transforming prevention, care, education, and research." National Academies Press. 2011.
8. Mansour et al. "Brain white matter structural properties predict transition to chronic pain." J Pain, 2013:154.
9. Lunn et al. "Duloxetine for treating painful neuropathy, chronic pain or fibromyalgia." Cochrane Systematic Review. 2014.
10. Heapy et al. "Interactive Voice Response-Based Self-management for Chronic Back Pain: The COPES Noninferiority Randomized Trial." JAMA Inter. Med. 2017;177:765-773.
11. Collier. "A short history of pain management." CMAJ. 2018;190(1):E26-E27.
12. Frieden et al. "Reducing the risks of relief—the CDC opioid-prescribing guideline." N Engl J Med. 2016;374:1501-1504.
13. Kaye et al. "Prescription Opioid Abuse in Chronic Pain: An Updated Review of Opioid Abuse Predictors and Strategies to Curb Opioid Abuse." Pain Physician. 2017;20:S111-S133.
14. Krebs et al. "Effect of Opioid vs Nonopioid Medications on Pain-Related Function in Patients With Chronic Back Pain or Hip or Knee Osteoarthritis Pain: The SPACE Randomized Clinical Trial." JAMA 2018;35:775-783.
15. Meerwijk et al. "Nonpharmacological Treatment of Army Service Members with Chronic Pain Is Associated with Fewer Adverse Outcomes After Transition to the Veterans Health Administration." J. Gen. Intern. Med. 2020;35:775-783.

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