

Chronic Pain



**is not just
a medical problem**

**Social and
psychological factors
can also make chronic pain
better or worse.**



What is Chronic Pain?

- Pain that persists beyond the time of normal healing and **lasts anywhere from a few months to many years.**
- **Chronic pain can have many underlying causes:** nerve damage or other injuries; health conditions such as arthritis, sciatica, or migraines; or, it may not have an identifiable origin.



Chronic Pain is Measured by:

- **how much pain interferes with one's ability to lead a normal life:** does it create problems with sleep, work, relationships, walking, or general activity? Does it worsen mood or reduce enjoyment?
- **how many chronic pain locations one has:** such as head, neck, back, arms, hands, hips, legs, feet, or knees.



**In 2023,
the CDC reported that
24% of Americans had chronic pain
and that reports of it increased with age.**

MIDUS

Midlife in the United States

A National Study of Health & Well-Being

Dear MIDUS participants,

The number of Americans living with chronic pain has been rising in recent decades. For some, chronic pain significantly affects quality of life. It may reduce enjoyment of daily activities, interfere with a person's ability to work, or lead to addiction to pain killers.

Although pain is a medical problem, it can also be affected by social and psychological factors. MIDUS research shows that stress, discrimination, poverty, and loneliness are linked to reports of pain. Alternately, supportive families, good sleep, and positive social connections are associated with lower levels of pain. Thus, chronic pain is best understood when approached from multiple angles.

Thanks to your participation in MIDUS, researchers are advancing our knowledge of how chronic pain matters in the lives of many U.S. adults.

Sincerely,



*Carol D. Ryff, Director
MIDUS National Study of Health & Well-Being*

Chronic Pain

MIDLIFE IN THE UNITED STATES: A NATIONAL STUDY OF HEALTH AND WELL-BEING
FUNDED BY THE NATIONAL INSTITUTE ON AGING

Chronic Pain Can Contribute To:

Negative Emotions

Over an 8-day period, those with chronic pain (compared to those without) reported:



- more daily stressors (arguments, problems at work or home)
- more negative emotions (anger, sadness)
- fewer positive emotions (happiness, calm).

However, on days with particularly positive, uplifting events (laughing with a friend, having a good conversation), those with chronic pain reported:

- a significant *decrease* in their negative emotions
- levels of positive emotions similar to those without chronic pain. [Kircher 2023]

Increased Risk of Enduring Psychological Problems

- People with arthritis, migraines, and back pain reported more depression, generalized anxiety, and panic attacks.
- People with chronic pain who reported higher anxiety were using higher amounts of pain medication 10 years later.
- People with chronic pain who reported depression (feeling sad for most days over a 2 week period) or anxiety (worrying more than others most days) were more likely to still have these conditions 20 years later. [McWilliams 2004, Skadberg 2020]



Unbalanced Stress Hormones

People with chronic pain were more likely to have higher levels of cortisol, a stress hormone, at the



end of the day, implying their bodies stayed in a state of alertness rather than preparing for sleep.

[Kim 2024]

Lower Well-being



- Reports of pain that interfered with daily life were associated with lower psychological well-being 10 years later. Low well-being includes feeling less in charge of one's life, having negative self views, and not trying new things.
- Higher well-being is associated with better physical health (including fewer headaches, less joint problems) and better sleep, which can help reduce chronic pain. [Nguyen 2020, Ryff 2015]

More Conflict between Work & Home

- People with chronic pain more likely reported that work interfered with their home life (made them tired or irritable).
- Those with this profile also reported:
 - ◆ more stressful events at home
 - ◆ more strain with family members



- ◆ more feelings of loneliness 10 years later, which predicted more chronic pain interference in their lives.

[Kim 2024, Nguyen 2025]

Increased Risk of Mortality

Reports that pain interfered with daily life (making activities, enjoyment, sleep difficult) were associated with increased risk of mortality, especially when the pain interference occurred during midlife rather than older ages.

[Glei 2023]

What Makes Chronic Pain Worse?



Daily Discrimination

- Those with chronic pain who experienced daily discrimination (receiving poor customer service, being called names; based on race, gender, age) were more likely to report that pain interfered with their daily lives.
- However, major lifetime discrimination (e.g., not being hired or promoted) was not linked to pain interference.
- Reports of daily discrimination based on weight were linked to certain types of pain (backache, joint pain) over an 8-day period. This was true even when weight was adjusted for, suggesting that higher body weight was not the cause of the pain. [Ong 2021, Sutin 2016]

Being Poor

- Socioeconomic status (SES) is a measure of inequality based on income, education, and occupational status (whether you have an important job).
- From the mid-1990s to the mid-2010s, data from MIDUS and other studies showed that:
 - ♦ reports of chronic pain increased at all levels of SES, but the largest increases occurred for those who were poor and in the lowest SES
 - ♦ physical limitations (difficulty walking short distances, climbing stairs), which can be worsened by chronic pain, also increased more for those with lower SES, but showed little change for those with higher SES.
 - Having lower SES increased odds of pain interfering with daily life 9 years later.



[Glei 2021, Liang 2024]

Family Strain

- Those who experienced strain in family relationships (family members made too many demands, criticized them a lot) were more likely to develop chronic pain that interfered more with their lives 10 years later. [Woods 2019, 2023]



Reduced Thinking Skills



- Those with lower mental skills (needed for setting goals and completing tasks) were more likely to develop chronic pain 9 years later.
- When people find it difficult to complete tasks that improve their health, they may develop conditions that lead to chronic pain. [Ng 2022]

Wear & Tear on the Body

- Allostatic load (AL) measures wear and tear on multiple body systems. People with higher AL characterized by high body weight, high blood sugar, and bad cholesterol (known as metabolic dysregulation), were more likely, 9 years later, to:
- have chronic pain in 3 or more locations (neck, back, knees, legs)
 - report that chronic pain interfered a lot with their daily lives. [Liang 2024]

Painful Menstrual Cramps



- Women reporting some or a lot of discomfort during their menstrual periods (vs. a little or none) had, 10 years later, a greater risk of developing:
- chronic pain (41% more likely)
 - chronic pain in more body regions (77% more likely)
 - chronic pain that interfered more with daily life (73% more likely). [Li 2021]

Reacting Badly to Stress

- Those without chronic pain who reported greater emotional reactions to stress (setbacks irritated them too much) had increased odds of developing chronic pain 10 years later. [Boring 2023]



What Protects Us from Chronic Pain?

Better Sleep

- People with chronic pain often have trouble sleeping. However, on days they were able to **sleep longer**, they reported fewer negative emotions (anger, sadness) and less pain.
- Those who had **better sleep** (easily falling asleep and staying asleep) had more positive emotions (feeling proud, enthusiastic), which were associated with less pain interference in their daily lives. [Anderson 2023, Ravyts 2019]



Making Sense of Life

- Those who felt they could make sense of their lives (finding them meaningful & coherent), had, 9 years later, fewer headaches and backaches, less joint and extremities pain, and were less likely to develop chronic pain.
- This ability to find life meaningful may help them make sense of their experiences with pain. [Boring 2022]



Having a Varied Social Life

- Those who reported more varied social activities, such as:
 - ♦ attending meetings (social, professional, sports)
 - ♦ volunteer work (in schools, health care, politics)
 - ♦ giving emotional support to family and friends
- or who showed an *increase* in variety over 9 years, reported feeling less lonely.
- **Being less lonely** was also associated with having, 9 years later:
 - ♦ a lower risk of any chronic pain
 - ♦ less chronic pain interference in daily life
 - ♦ fewer chronic pain locations. [Lee 2023]



Making Life Go Well

- When those with chronic pain were asked to describe what makes their lives go well, twelve key topics emerged, including:
 - ♦ avoiding stress
 - ♦ living in the moment
 - ♦ embracing change
 - ♦ balancing work & play
 - ♦ treating others with kindness
 - ♦ cultivating a positive mind set
 - ♦ practicing spirituality and faith
 - ♦ engaging in meaningful daily activities (exercising, reading, volunteering, church).
- Significantly, those who mentioned the importance of **maintaining and prioritizing social connections** with family and friends reported less pain interference in their daily lives and less use of prescription pain medicine. [Cintron 2025]



Supportive Families

Among those whose pain had not yet become chronic (they had recent injuries), having supportive families who cared about and understood them was associated with decreased risk of their pain becoming chronic 10 years later. [Woods 2019]



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Publications about chronic pain can be found at:

MIDUS.wisc.edu

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