"Making Waves"

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ASRA PAIN MEDICINE

Effects of Adherence to Lifestyle Medicine Pillars on Pain Interference in U.S. Adults

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BACKGROUND

Pain interference measures how pain disrupts daily activities and is a major predictor of disability, reduced quality of life, and mortality. Lifestyle factors including physical inactivity, poor sleep, obesity, alcohol use, and smoking are associated with more severe chronic pain.

STUDY QUESTION

Is greater adherence to healthy lifestyle behaviors associated with a lower prevalence of moderate to severe pain interference among U.S. adults?

THE 5 LIFESTYLE PILLARS

- Non-smoking
- ≥ 150 min exercise/week
- 7–9 hours sleep
- BMI < 30 kg/m²
- No heavy alcohol use

METHODS

- U.S. adults (NHIS 2019–2024)
- Composite lifestyle score (0–5)
  Poor (0–1) | Intermediate (2–3) | Ideal (4–5)
- Moderate to severe pain interference defined by self-reported interference with normal work activities
- Survey-weighted modified Poisson regression, adjusted for age, sex, and race/ethnicity

IRB STATEMENT
This study used publicly available, de-identified data from the National Health Interview Survey (NHIS). Institutional Review Board approval was not required.

MORE HEALTHY HABITS. 64% LOWER pain interference with daily life



Prevalence of moderate to severe pain interference by lifestyle score (reference = poor, 0–1 pillars)

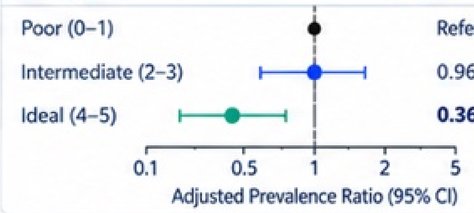
Poor (0–1 pillars)	Intermediate (2–3 pillars)	Ideal (4–5 pillars)
Reference	PR 0.96 (95% CI 0.63–1.45)	PR 0.36 (95% CI 0.18–0.75)

Population Characteristics

Characteristic	No or Mild Pain Interference (n = 76.8 million)	Moderate to Severe Pain Interference (n = 12.5 million)	p value
Estimated U.S. adults, millions	76.8	12.5	—
Mean age, years (SD)	49.9 ± 16.8	56.8 ± 16.6	< 0.001
Female, %	52.2%	58.0%	< 0.001
Race/ethnicity, %			
White	61.2%	65.1%	—
Black	12.6%	13.8%	—
Hispanic	17.1%	15.5%	—
Other	9.1%	5.6%	—
Ideal lifestyle score (4–5), %	10.0%	3.8%	0.034

Adjusted Prevalence of Moderate to Severe Pain Interference

Lifestyle score	Adjusted PR (95% CI)	p value
Poor (0–1)	Reference	—
Intermediate (2–3)	0.96 (0.63 – 1.45)	0.84
Ideal (4–5)	**0.36 (0.18 – 0.75)**	**0.006**



KEY TAKEAWAYS

- Greater adherence to healthy lifestyle behaviors is associated with a lower prevalence of moderate to severe pain interference among U.S. adults.
- Findings support a potential role for comprehensive lifestyle medicine approaches in mitigating the population burden of pain-related functional impairment.
- Cross-sectional design; causality cannot be determined.

Scan for full abstract, references, and more information.

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