

Comparison with benchmark effects

Brian Caffo, Jeff Leek, Roger Peng

@bcaffo

www.bcaffo.com

It's hard to interpret an effect or its magnitude because it's a newly studied construct

Solution:

Contrast the effect/P-value/effect size with a known construct

Past adult lead exposure is linked to neurodegeneration measured by brain MRI

W. F. Stewart, PhD, MPH, B. S. Schwartz, MD, MS, C. Davatzikos, PhD, D. Shen, PhD, D. Liu, MS, X. Wu, MS, A. C. Todd, PhD, W. Shi, MD, MS, S. Bassett, PhD and D. Youssef, MD, MBA

Unadjusted effect estimate of -1.141 mL of brain volume per 1 μg lead per gram of bone mineral increase

Past adult lead exposure is linked to neurodegeneration measured by brain MRI

W. F. Stewart, PhD, MPH, B. S. Schwartz, MD, MS, C. Davatzikos, PhD, D. Shen, PhD, D. Liu, MS, X. Wu, MS, A. C. Todd, PhD, W. Shi, MD, MS, S. Bassett, PhD and D. Youssef, MD, MBA

Unadjusted effect estimate of -1.141 mL of brain volume per 1 μg lead per gram of bone mineral increase

Normal aging over the age 40 results in about 0.5% decline in brain volume per year

Average brain size was 1,150 mL; -1.141 decline is roughly equivalent about 20% of a year