

Air Pollution May Weaken the Bones

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Air pollution increases the risk for osteoporosis and bone fractures, researchers report.

Investigators analyzed data from two studies. The first tracked hospital admissions among 9.2 million Medicare recipients in the Northeast over eight years. The second looked at levels of parathyroid hormone, which aids bone health, in 692 middle-aged low-income men in Boston.

The [study, in Lancet Planetary Health](#), found that the risk for bone fractures among people over 65 increased steadily as levels of air pollution — specifically, particulate matter smaller than 2.5 micrometers, or PM 2.5 — went up. Rates were almost 5 percent higher in areas with the highest concentrations of PM 2.5 than in those with the lowest.

The study in middle-aged men found that people living in locations with higher levels of air pollution had lower concentrations of parathyroid hormone and lower levels of bone mineral density.

The studies controlled for race and ethnicity, income, smoking, physical activity and other variables.

“Air pollution is like diluted smoking,” said the senior author, Andrea A. Baccarelli, a professor of environmental medicine at the Columbia University Mailman School of Public Health. “Smoking causes cancer, cardiovascular disease and bone mineral density loss. So does air pollution. Even at pollution levels the Environmental Protection Agency considers acceptable, there is still an increased risk.”