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Dr. Joe Romm is Founding Editor of Climate Progress, “the indispensable blog,” as NY Times columnist Tom Friedman describes it.

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Trump's EPA policies risk more Alzheimer's cases, doctors warn

Two new studies support findings that polluted air causes dementia.



Researchers have found that particulates from coal plants (like this one in Kansas) and

vehicles increase the risk of dementia. Credit: AP Photo/Charlie Riedel

Two new studies add to the [growing body of evidence](#) that air pollution is causing higher rates of Alzheimer's and dementia.

Particulate matter may be responsible for more than [one in five dementia cases](#), as the smallest particles appear to travel directly from the nose to the brain, where they do considerable damage.

Tragically, the new president campaigned on rolling back Clean Air Act rules and boosting coal use, which, along with vehicle exhaust, is the principal source of particulates.

"If people in the current administration are trying to reduce the cost of treating diseases, including dementia," physician-epidemiologist [Dr. Jiu-Chuan Chen](#) told the [L.A. Times](#), "then they should know that relaxing the Clean Air Act regulations will do the opposite."

Indeed, many studies find serious health impacts even at particulate levels below current EPA standards, Chen told ThinkProgress.

[Former member of Trump's EPA transition team suggests air pollution doesn't kill people](#)

[4.2 million people died prematurely from air pollution in 2015. thinkprogress.org](#)

Chen is the senior lead author for a new [11-year epidemiological study](#) in the Nature journal *Translational Psychiatry*.

His team of researchers

[found](#)

that older women breathing air pollution that exceeds the EPA's standard for fine particles (PM2.5) "

[are 81 percent more at risk](#)

for global cognitive decline and 92 percent more likely to develop dementia, including Alzheimer's."

PM2.5 is particulate matter (PM) smaller than 2.5 micrometers in diameter. In comparison, a

strand of human hair is more than 20 times wider than PM2.5.

“Microscopic particles generated by fossil fuels get into our body directly through the nose into the brain,” co-author Prof. Caleb Finch, a leading expert on dementia, [said in a statement](#). “Cells in the brain treat these particles as invaders and react with inflammatory responses, which over the course of time, appear to exacerbate and promote Alzheimer’s disease.”



This gif accompanied the study's [news release](#). CREDIT: University of Southern California

The [other key study](#) released last month was published in the journal Lancet and found “living close to heavy traffic was associated with a higher incidence of dementia.”

Canadian researchers found that those living within 50 meters (160 feet) of high-traffic roads “had a seven percent higher likelihood of developing dementia compared to those who lived

more than 300 meters (984 feet) away from busy roads.”

The air near major roads has been found to have particulate levels 10 times greater than the air just a few hundred feet away.

Given the devastating impact that dementia has on individuals and families — not to mention the enormous economic costs — this evidence suggests the country should tighten Clean Air rules for fossil fuel plants, especially coal plants.

Since even low levels of the smallest particles are dangerous to humans, Trump's plans to kill the Clean Power Plan and gut the EPA's ability to enforce Clean Air rules are even more cruel and immoral than they first appeared.

“It is really a policymaker's responsibility to make sure that the air everyone breathes is clean and safe,” Chen said. “This is a time when everyone needs to speak up, including scientists.”

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