Harm From Air Pollution Comparable to Smoking

A new study from researchers at several American universities has found that long-term exposure to air pollution, especially ozone, leads to an increase in emphysema that mirrors that of smoking a pack of cigarettes a day for 29 years. Chronic lower respiratory illnesses like emphysema are the fourth leading cause of death in the United States, but the number of people smoking fell to its lowest recorded point in U.S. history in 2017.

> *Rates of chronic lung disease in this country are going up and increasingly it is recognized that this disease occurs in nonsmokers…We really need to understand what's causing chronic lung disease, and it appears that air pollution exposures that are common and hard to avoid might be a major contributor…"*
>
> *Dr. Joel Kaufman*

Nuts and Bolts

Of the air pollution examined in this study, researchers found that ground-level ozone, or O3, pollution had the biggest effect on emphysema. The study took place over a period of 18 years in six different cities in the United States – Chicago, Winston-Salem, N.C., Baltimore, Los Angeles, St. Paul, Minnesota, and New York. It found that cities, where average ozone levels rose by 3 ppb (parts per billion), saw a corresponding rise in emphysema rates.

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> *We were surprised to see how strong air pollution's impact was on the progression of emphysema on lung scans, in the*

> *same league as the effects of cigarette smoking, which is by far the best-known cause of emphysema…”*
>
> *According to Dr. Kaufman*

The United States and Europe have seen declining levels of ozone in cities over the past 30 years. However, countries like India and China have seen the opposite trend. In 2015, the average ozone levels in 74 major Chinese cities increased by 3.4 percent. India and China accounted for 79 percent of premature respiratory deaths attributed to ozone pollution in a 2010 study. That can have serious effects on public health.

The New Normal

In 2015, air pollution killed 6.5 million people worldwide. It’s likely those numbers will keep rising. In the United States, the Trump Administration has been dismantling EPA policies designed to keep air pollution in check. They have finished or are currently in the process of rolling back 22 regulations that govern air pollution and emissions, including changes to the Clean Air Act. Why are we going backward?

Sources:

- *Air pollution can accelerate lung disease as much as a pack a day of cigarettes* – University of Washington
- *Association Between Long-term Exposure to Ambient Air Pollution and Change in Quantitatively Assessed Emphysema and Lung Function* – JAMA
- *Increasing Air Pollution Causes Lung Disease Equivalent to Smoking Pack of Cigarettes a Day for 29 Years* – Newsweek
- *Ozone Pollution Grows, but It Can Be Fixed* – Scientific American
- *One million premature deaths linked to ozone air pollution* – Phys Org

- *83 Environmental Rules Being Rolled Back Under Trump* – New York Times