

# IS AIR POLLUTION THE REASON BEHIND COGNITIVE DYSFUNCTION?

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Air pollution is the presence of substances in the atmosphere that are harmful to the health of humans and other living beings. Air pollution may cause diseases, allergies, and even death to humans. One of the environmental factors which are less studied but found to have a significant influence on cognitive function is exposure to air pollutants. Studies around the world have reported that exposure to high amounts of air pollution can negatively impact the cognitive functioning of adults. Many victims of air pollution ironically experience significant “brain fog” and have sensory processing deficits in smell, hearing, and balance. Air pollutants affect the central nervous system (CNS) either directly by the transport of nano-sized particles into the CNS or through systemic inflammations. The release of nanoparticles to the environment as aerosols from traffic, waste, and industry processes strongly suggests that inhalation is an important access route for humans.

Many epidemiologic studies have reported that exposure to airborne pollutants can contribute to neurodegenerative disease processes already from early childhood, especially if the individuals are chronically exposed to the contaminants.

Air pollution is a multifaceted toxic chemical mixture capable of assaulting the central nervous system. Despite being a relatively new area of investigation, overall, there is mounting evidence implicating adverse effects of air pollution on cognitive function in both adults and children. Some studies show that indoor air pollution exposure is also responsible for cognitive dysfunction

Exposure to indoor air pollution through fuels used for cooking and heating was significantly associated with cognitive dysfunction among elderly women. Some researchers found that inflammation had damaged the brain cells and prevented that region of the brain from developing, and the ventricles simply expanded to fill the space.

**A child born today may not be able to breathe pure air until they are eight years old.**

Long-term exposure to air pollution throughout childhood can result in permanently decreased lung function. The development of fetuses has also been demonstrated to be affected by dirty air.



On the basis of these findings, there is also speculation that may be air pollution playing a role in autism and other neurodevelopmental disorder.

The effects of air pollutants are at a high level of interest for scientific, governmental, and public communities. The problem is a major health concern for both developing and developed countries. More studies and more intensive collaborations are needed to generate larger and more diverse cohorts and standardized data that would allow us to draw stronger conclusions related to cognitive dysfunction

## DID YOU KNOW?

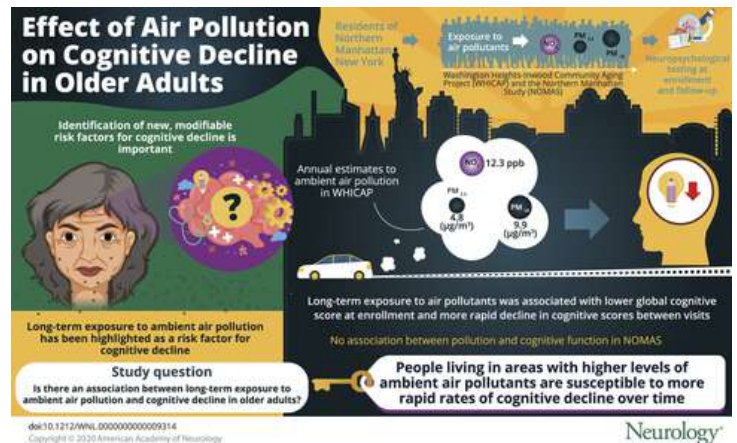
**For the first time in 2020, air quality management received specific central financing.**

For the first time in 2020, 42 million or more Indian cities will get specialised air quality management money, thanks to suggestions made by the 15th Finance Commission. Budgetary allocations to Urban Local Bodies (ULBs) were INR 2,200 crore in 2020 and INR 2,217 crore in 2021. These grants are essential for integrating air quality into local administration, but they exclude up to 90 non-attainment communities. They also can't be utilised for acts that are particular to the transportation and industrial sectors, which aren't covered by ULBs.

24th January



International Day of Education



Source: [n.neurology.org](http://n.neurology.org)



You have a tremendous influence on air pollution when you pick sustainable products and locally sourced commodities and food. Food and clothing do not have to travel thousands of miles to reach you. You're helping to reduce the amount of fossil fuels used by ships, aircraft, and trucks to move products vast distances.

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