

Trends Neurosci. 2009 Sep;32(9):506-16. doi: 10.1016/j.tins.2009.05.009. Epub 2009 Aug 26.

## **Air pollution: mechanisms of neuroinflammation and CNS disease**

Block ML, Calderón-Garcidueñas L

### **Abstract**

Air pollution has been implicated as a chronic source of neuroinflammation and reactive oxygen species (ROS) that produce neuropathology and central nervous system (CNS) disease. Stroke incidence and Alzheimer's and Parkinson's disease pathology are linked to air pollution. Recent reports reveal that air pollution components reach the brain; systemic effects that impact lung and cardiovascular disease also impinge upon CNS health. While mechanisms driving air pollution-induced CNS pathology are poorly understood, new evidence suggests that microglial activation and changes in the blood-brain barrier are key components. Here we summarize recent findings detailing the mechanisms through which air pollution reaches the brain and activates the resident innate immune response to become a chronic source of pro-inflammatory factors and ROS, culminating in CNS disease.

PMID: 19716187

Source: <http://www.ncbi.nlm.nih.gov/pubmed/19716187>