

## **Is pollution a major contributor to acute stroke on a global scale? - no**

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The item of air pollution (AP) and its impact on overall health and especially on stroke has been the matter of investigation for many years and recently, in *Global Burden of Disease Study* it has emerged as a significant contributor to global stroke burden, especially in low- and middle-income countries. Even though this and some other researches have suggested a link between air pollution and ischemic stroke, due to huge diversity of results of numerous other studies, for drawing definitive conclusions, further research is still needed. Due to the complexity of stroke with its types and subtypes, the results of their reaction to air pollution differ. Some studies have shown the link between cardioembolic stroke and AP, others with SAH but not with intracerebral haemorrhage. There was a suggestion that nitrogen dioxide exposure might be associated with stroke caused by small vessel disease, while there are studies not reporting any association of AP and the risk of ischemic stroke. In some studies, AP was more affecting young adults and in some it was more pronounced in women. Some studies reported clearer link between AP and recent stroke in patients with other risk factors like diabetes and previous stroke. Studies have varied by the concentration and types of pollutants studied, which vary geographically, as well as by duration to AP exposure being short- or long-term, and in some studies being present only during warm seasons. Regulations have improved air quality in many countries in Europe and the United States, resulting in greater life expectancy, what highlights the continued importance of further efforts in that direction.