

Passive smoking increases risk of severe dementia, according to study in China

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Passive smoking, also known as 'second-hand' smoke or environmental tobacco smoke (ETS), is known to cause serious cardiovascular and respiratory diseases, including coronary heart disease and lung cancer. However, until now it has been uncertain whether ETS increases the risk of dementia, mainly due to lack of research. Previous studies have shown an association between ETS and cognitive impairment, but this is the first to find a significant link with dementia syndromes.

The study, published in *Occupational and Environmental Medicine*, is a collaboration between scientists at King's College London and Anhui Medical University, China, along with colleagues in the UK and USA.

According to the [World Health Organization](#) (WHO), nearly 80 percent of the more than one billion smokers worldwide live in low- and middle-income countries, where the burden of tobacco-related illness and death is heaviest; but only 11 percent of the world's population are protected by comprehensive smoke-free laws.

China is the largest consumer of tobacco in the world, with 350 million smokers. Since 2006, the Chinese government has actively promoted the introduction of smoke-free environments in hospitals, schools, on public transport and in other public places, but implementation has not been widespread.

Recent data show that the prevalence of passive smoking is still high, with over 50 percent of people exposed to environmental tobacco smoke

on a daily basis. China also has the highest number of [dementia sufferers](#) in the world, with increasing rates of new cases as the population ages.

Dr Ruoling Chen, senior lecturer in public health from King's College London, and colleagues interviewed 5,921 people aged over 60 in the rural and urban communities of Anhui, Guangdong, Heilongjiang, Shanghai and Shanxi to characterise their levels of ETS exposure, smoking habits and assess levels of dementia syndromes.

They found that 10 percent of the group had severe dementia syndromes. This was significantly related to exposure level and duration of passive smoking. The associations with severe syndromes were found in people who had never smoked and in former and current smokers.

The data from the Anhui cohort, which were collected at baseline in 2001-03 for dementia syndromes and in the follow up in 2007-08 for ETS exposure and dementia, further excluded the possibility that dementia syndromes caused people to be more exposed to environmental tobacco smoke.

Dr Ruoling Chen, also a visiting professor at Anhui Medical University said: 'Passive smoking should be considered an important risk factor for severe dementia syndromes, as this study in China shows. Avoiding exposure to ETS may reduce the risk of severe dementia syndromes.

'China, along with many other countries, now has a significantly ageing population, so dementia has a significant impact not only on the patients but on their families and carers. It's a huge burden on society.'

The findings from this study, together with a second recent study by Chen and colleagues published in *Alzheimer's & Dementia* on the links between passive smoking and Alzheimer's disease, strengthen the case for public health measures to protect people from exposure to

environmental tobacco smoke.

'At present, we know that about 90 percent of the world's population live in countries without smoke-free public areas. More campaigns against tobacco exposure in the general population will help decrease the risk of severe dementia syndromes and reduce the dementia epidemic worldwide.'

He added: 'The increased risk of severe dementia syndromes in those exposed to [passive smoking](#) is similar to increased risk of [coronary heart disease](#) – suggesting that urgent preventive measures should be taken, not just in China but many other countries.'

More information: Association between environmental tobacco smoke exposure and dementia syndromes, *Occup Environ Med* 2012;0:1–8. [DOI:10.1136/oemed-2012-100785](https://doi.org/10.1136/oemed-2012-100785).
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Association of environmental tobacco smoke with dementia and Alzheimer's disease among never smokers; *Alzheimer's & Dementia*, Volume 8, Issue 6, November 2012, Pages 590–595.
[dx.doi.org/10.1016/j.jalz.2011.09.231](https://doi.org/10.1016/j.jalz.2011.09.231)

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