

Road traffic pollution as serious as passive smoke in the development of childhood asthma

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New research conducted in 10 European cities has estimated that 14% of chronic childhood asthma is due to exposure to traffic pollution near busy roads.

The results are comparable to the burden associated with passive smoking: the [World Health Organization](#) estimates that between 4% and 18% of asthma cases in children are linked to passive smoking.

The findings, published online today (22 March 2013) ahead of print in the *European Respiratory Journal*, come as the European Commission has declared 2013 the 'Year of Air', which highlights the importance of clean air for all and focuses on actions to improve air quality across the EU.

Until now, traffic pollution was assumed to only trigger [asthma symptoms](#) and burden estimations did not account for [chronic asthma](#) caused by the specific range of toxicants that are found near heavily used roads along which many Europeans live.

The researchers used a method known as population-attributable fractions to assess the impact of near-road traffic pollution. This calculates the proportional reduction in disease or death that would occur if exposure to a risk factor were reduced to a lower level.

The new research used data from existing epidemiological studies which found that children exposed to higher levels of near-road traffic-related pollution also had higher rates of asthma, even when taking into account a range of other relevant factors such as passive smoking or socioeconomic factors.

The researchers aimed to take these findings further and estimate how many asthma cases could be avoided if exposure was removed.

The results found that 14% of asthma cases across the 10 cities could be attributed to near-road traffic pollution. The findings also take into account differences in the health of the overall population in different cities.

Lead author, Dr Laura Perez at the Swiss Tropical and Public Health Institute, said: "Air pollution has previously been seen to trigger symptoms but this is the first time we have estimated the percentage of cases that might not have occurred if Europeans had not been exposed to road [traffic pollution](#). In light of all the existing [epidemiological studies](#) showing that road-traffic contributes to the onset of the disease in children, we must consider these results to improve policy making and urban planning."

More information: Chronic burden of near-roadway traffic pollution in 10 European cities (APHEKOM network), Laura Perez, Christophe Declercq, Carmen Iñiguez, Inmaculada Aguilera, Chiara Badaloni, Ferran Ballester, Catherine Bouland, Olivier Chanel, FB Cirarda, Francesco Forastiere, Bertil Forsberg, Daniela Haluza, Britta Hedlund, Koldo Cambra, Marina Lacasaña, Hanns Moshhammer, Peter Otorepec, Miguel Rodríguez-Barranco, Sylvia Medina, Nino Künzli, [DOI: 10.1183/09031936.00031112](#)

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