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Commuters on Public Transport Exposed to Higher Pollution Levels than Car Users

Researches have described the “environmental injustice” facing commuters, who are exposed to up to eight times more pollution than car users. Even though motorists produce the most pollution per commuter, they are the least exposed to harmful particulate matter (PM) as they are sealed off from the outside, a study by the University of Surrey found.

“We found that there is definitely an element of environmental injustice among those commuting in London, with those who create the most pollution having the least exposure to it,” Dr Prashant Kumar, who led the study, said.

The team compared how commuters using cars, buses and the underground in different areas of London were exposed to a range of pollutants. The study, published in the journal Environment International, found commuters on some underground lines are the most exposed to poor air quality, followed by those on buses.

Monitors worn by commuters found those on the tube were exposed to 68 micrograms of PM10, tiny particles of soot that are breathed into the lungs, compared to eight micrograms of exposure experienced by motorists. Exposure to PM was much higher on tube trains with opening windows compared to newer trains that do not have opening windows. Meanwhile on the surface bus users were exposed to higher levels of black carbon and particles than car users. The researchers also found areas with the lowest incomes were exposed to the highest PM levels.

The study did not find conclusive evidence to link deprivation with higher exposure, however people from affluent areas tended to use cars more. They received the lowest doses of while generating the largest emissions per person. They observed the opposite for people from higher deprivation areas, who rely more on buses.

Dr Kumar said: “There is an interesting trade-off of pollution exposure between different modes of transport. For example, commuters travelling to work on underground trains are exposed to the highest levels of large-sized particles while being exposed to the highest level of black carbon and ultrafine particles during commute in buses. The relatively new airtight trains with closed windows showed a significant difference to the levels of particles people are exposed to over time, suggesting that operators should consider this aspect during any upgrade of underground trains, along with the ways to improve ventilation in underground tunnels.”

The impact of air pollution was revealed in a December study, which found running or cycling home from work when pollution is high could damage the lungs and lead to heart failure. Towards the end of January, pollution in London passed levels in Beijing, prompting mayor Sadiq Khan to issue the highest air pollution alert in the capital for the first time.

The Daily Telegraph, 14th February, 2017

<http://www.telegraph.co.uk/news/2017/02/14/commuters-public-transport-exposed-higher-pollution-levels-car/>