

# Children exposed to five times more air pollution on school run

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Air monitoring backpacks. Credit: King's College London

A new King's report has found that London children traveling to primary schools across the capital are five times more exposed to air pollution than at any other time of the day.

Some 250 pupils took part in the study, funded by the Mayor of London, by carrying special backpacks with state-of-the-art Dyson air quality

sensors on their journey to and from school.

The pupils were from [primary schools](#) in Richmond, Greenwich, Haringey, Hammersmith and Fulham, and Kensington & Chelsea. They each carried the specialist backpacks, which measured [fine particulate matter](#) (PM<sub>2.5</sub>) and nitrogen dioxide (NO<sub>2</sub>) levels, for a week.

Data revealed that:

- Pupils were exposed to on average five-times-higher concentrations of harmful NO<sub>2</sub> [pollution](#) on the school run than when they were at school
- PM<sub>2.5</sub> concentrations were also higher during the journey to school, though the difference was less pronounced
- For both NO<sub>2</sub> and PM<sub>2.5</sub> children who walked to school by backstreets were exposed to the lowest levels of pollution
- The highest concentrations were recorded by children walking along main roads
- Pollution levels were higher in cars and buses than on back streets
- Parents who drive to school can contribute to [high levels of air pollution](#) on back streets as they tend to use these roads for school runs while leaving their car engines idling

Each participating school has received an 'air quality audit' to help them reduce pupils' exposure to pollution in and around schools and a grant of £10,000 to help them deliver some measures immediately. Further action is then expected to be delivered in partnership with the relevant local authority.

Dr. Ben Barratt from King's said: "The aim of our study was to use personal sensors to highlight children's exposure to air pollution around their schools. We are delighted to see that, as a result of taking part in

the study, so many children and parents found cleaner, healthier ways to travel to and from school."

The Mayor of London, Sadiq Khan said: "Air pollution is a public health crisis and it is shocking that pupils are exposed to such high levels of harmful air. All the schools who took part in this study are using the results to educate pupils and their families on air quality and helping them find the least polluting routes for their journeys. We have also provided air quality audits and funding at each school to help deliver urgent pollution reduction measures from installing green 'barrier' walls around playgrounds, to working with boroughs on car restrictions around main entrances. I remain committed to doing everything in my power to ensure London children can breathe clean air. "

Kate Barnes, Head teacher at Haimo Primary School in Eltham, which took part in the study said: "Since taking part in the Breathe London Wearable Study our children and families have been more conscious than ever about how we travel to school and it is still a talking point. The [children](#) have worked hard this half term planting the new green space at the corner of our [school](#) that is most exposed to pollution from the very busy Westhorpe Ave. They are aware of the effect their work will have on their environment and are rightly proud of the positive impact they are having for themselves, the wider community and future generations."

Provided by King's College London

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