



PRESS RELEASE

Does living near busy roads increase respiratory symptoms in young children?

While many surveys have studied the effect of road traffic on the frequency of respiratory problems in schoolchildren and adults, data for very young (pre-school) children are rare, although this age-group is likely to be most vulnerable. We therefore wanted to investigate if respiratory symptoms are more common in young children living in streets with moderate or dense traffic compared to those exposed to little or no traffic.

In 1998, we sent a respiratory questionnaire to the parents of a random sample of 4400 children aged 1 to 5 years in Leicestershire, UK. Eighty percent of those with a valid address (3410/4277) were returned completed. Road traffic at the child's home was reported by the parents, who could choose between the categories "dense", "moderate", and "little or no traffic".

Children living near busy roads reported more often respiratory symptoms compared to unexposed children. Relative risks (Odds ratios) for wheeze were 1.28 for children exposed to moderate traffic and 1.37 for those exposed to dense traffic. Relative risks for chronic rhinitis, were 1.21 and 1.33, for night cough 1.30 and 2.00 and for cough apart from colds 1.47 and 1.92 for children exposed to moderate and dense traffic respectively compared to unexposed children (with a risk of 1). All levels of severity of wheeze increased with higher traffic density. The effect on cough was found only in children living in the countryside.

On the other hand, we found evidence for exaggerated reporting of road traffic in parents of children with wheeze and asthma: Parents of wheezy children reported in the questionnaire a higher traffic density at their home, compared to parents of asymptomatic children living at the same place (6-digit postcode). No such reporting bias was found for cough.

Our results support the hypothesis that living near busy roads increases frequency and severity of respiratory symptoms in pre-school children, especially chronic cough. Exaggerated reporting of traffic density is, however, likely to explain some or all of the results in children with wheeze. Future studies should therefore be based on objective measurements of both road traffic and health status.

Original abstract title and authors

Road traffic and respiratory symptoms in pre-school children

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