

# Exposure to traffic noise and air pollution and risk for febrile seizure: a cohort study <sup>1</sup>

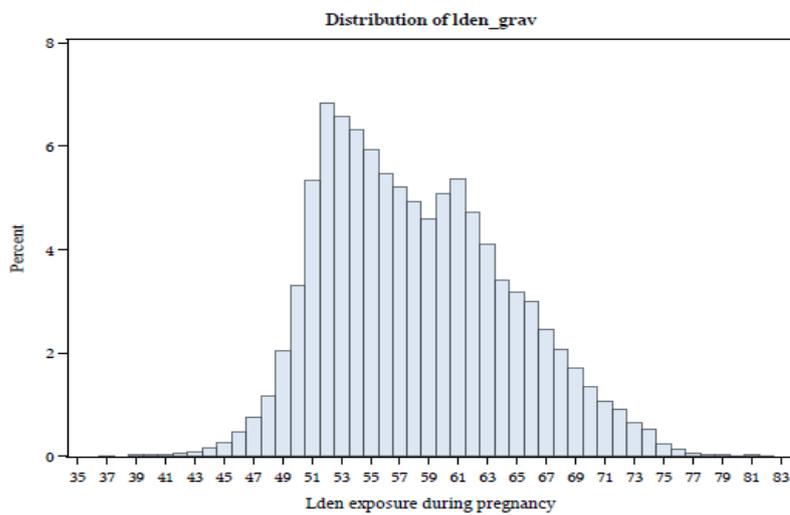
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1. *Supplementary material*

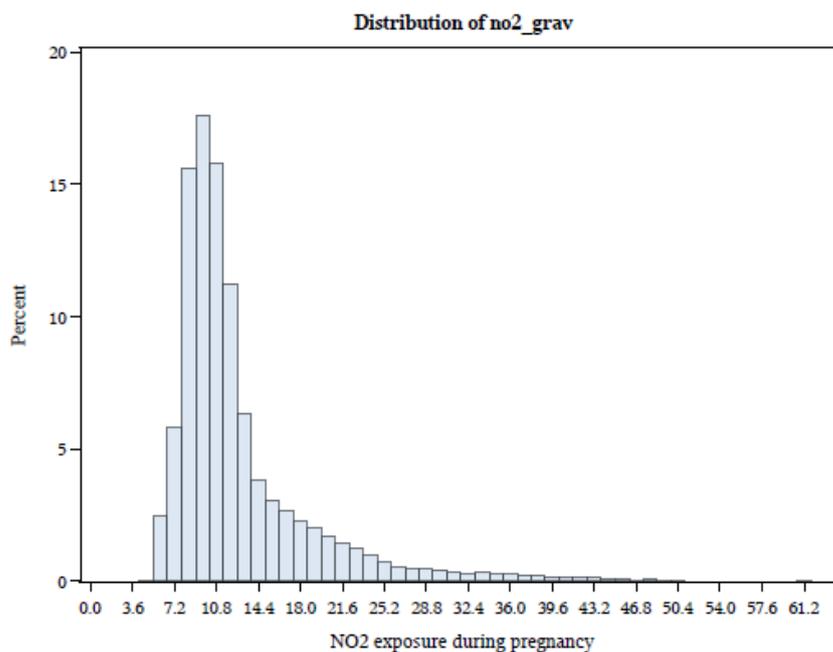
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**Figure 1.** Distributions of exposure to road traffic noise (a) and air pollution (b) during pregnancy

a



b



**Table A** Associations between residential exposure (linear, per 10 unit increase) to road traffic noise and air pollution during pregnancy and at diagnosis and risk for incident febrile seizures among 51 465 children

Exposures	Model 1 <sup>a</sup>	Model 2 <sup>b</sup>	Model 3 <sup>c</sup>
	IRR (95% CI) <sup>d</sup>	IRR (95% CI) <sup>d</sup>	IRR (95% CI) <sup>d</sup>
Mean exposure during pregnancy			
Road traffic noise (L <sub>den</sub> , per 10 dB)	1.09 (1.02-1.17)	1.06 (0.99-1.13)	1.06 (0.98-1.15)
Air pollution (NO <sub>2</sub> , per 10 µg/m <sup>3</sup> )	1.05 (0.99-1.12)	1.03 (0.97-1.10)	1.00 (0.92-1.08)
Yearly exposure at diagnosis address			
Road traffic noise (L <sub>den</sub> , per 10 dB)	1.14 (1.07-1.22)	1.12 (1.05-1.20)	1.08 (1.00-1.17)
Air pollution (NO <sub>2</sub> , per 10 µg/m <sup>3</sup> )	1.15 (1.08-1.23)	1.12 (1.04-1.20)	1.07 (0.99-1.16)

<sup>a</sup> Model 1: crude

<sup>b</sup> Model 2: adjusted by sex, maternal age at birth, household income at birth, maternal education at birth, parity at birth, smoking and alcohol consumption during pregnancy, calendar-year (time-dependent)

<sup>c</sup> Model 3: Model 2 plus mutual noise/NO<sub>2</sub> adjustment

<sup>d</sup> IRR, incidence rate ratio; CI, confidence interval

**Table B** Associations between residential exposure to railway noise at diagnosis and risk for incident febrile seizures among 51 465 children

Railway noise, $L_{den}$	N cases	Model 1 <sup>a</sup> IRR (95% CI)	Model 2 <sup>b</sup> IRR (95% CI)
Yearly exposure at diagnosis address			
< 40 dB	1879	1 (ref)	1 (ref)
40-50 dB	118	1.12 (0.93-1.34)	1.11 (0.92-1.33)
50-60 dB	109	1.01 (0.83-1.22)	0.99 (0.82-1.21)
≥ 60 dB	29	1.07 (0.84-1.36)	1.06 (0.83-1.34)
<i>Linear trend, per 10 dB</i>	<i>2175</i>	<i>0.98 (0.85-1.12)</i>	<i>0.98 (0.85-1.12)</i>

IRR: incidence rate ratio; CI: confidence interval; IQR: Interquartile range

<sup>a</sup> Model 1: crude

<sup>b</sup> Model 2: adjusted by sex, maternal age at birth, household income at birth, maternal education at birth, parity at birth, smoking and alcohol consumption during pregnancy, calendar-year (time-dependent)