

**Air pollution, fetal and infant tobacco smoke exposure, and wheezing in preschool
children: a population-based prospective birth cohort.**

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Table S1. Cross table of fetal smoke exposure with infant smoke exposure

| | No infant smoke exposure (%) | Infant smoke exposure (%) | <i>Total</i> |
|-----------------------------|------------------------------|---------------------------|--------------|
| No fetal smoke exposure (%) | 3,513 (87.8) | 490 (12.2) | 4,003 (100) |
| Fetal smoke exposure (%) | 257 (40.7) | 374 (59.3) | 631 (100) |
| <i>Total</i> | 3,770 | 864 | 4,634 |

Values are numbers (percentages)

Table S2. Levels of air pollutant

| | Overall | Previous month | | Previous year | | |
|---|-----------------|----------------|--------------|---------------|--------------|--|
| | Age 1 - 3 years | Age 1 year | Age 1 year | Age 2 years | Age 3 years | |
| PM₁₀ (µg/m³) | n=3,295 | n=3,898 | n=3,963 | n=3,771 | n=3,166 | |
| Mean (SD) | 28.36 (1.29) | 28.29 (4.61) | 28.86 (2.11) | 28.27 (1.57) | 27.92 (1.67) | |
| Min | 25.84 | 20.04 | 24.47 | 24.19 | 23.96 | |
| 25% | 27.49 | 24.77 | 27.49 | 27.29 | 26.73 | |
| 50% | 28.18 | 27.51 | 28.60 | 28.25 | 27.91 | |
| 75% | 28.89 | 31.59 | 29.78 | 29.13 | 28.91 | |
| Max | 36.01 | 44.28 | 39.81 | 35.82 | 35.76 | |
| NO₂ (µg/m³) | n=3,295 | n=3,897 | n=3,963 | n=3,772 | n=3,166 | |
| Mean (SD) | 37.39 (4.01) | 38.14 (6.81) | 38.66 (4.20) | 37.46 (4.17) | 36.22 (4.28) | |
| Min | 28.81 | 18.20 | 29.66 | 27.10 | 27.02 | |
| 25% | 34.61 | 33.73 | 35.72 | 34.54 | 33.35 | |
| 50% | 37.10 | 39.07 | 38.34 | 37.33 | 35.69 | |
| 75% | 39.32 | 42.95 | 40.68 | 39.49 | 38.58 | |
| Max | 56.05 | 58.27 | 59.60 | 55.87 | 55.68 | |

Table S3. Exposure to air pollutants in previous year, tobacco smoke and wheezing

| Odds ratio of wheezing (95% CI) | | | | | | | | | | |
|---------------------------------|------------------------|----------------------|-----------------------|-----------------------|-----------------------|------------------------|----------------------|----------------------|----------------------|----------------------|
| | PM ₁₀ | | | | | NO ₂ | | | | |
| | Tobacco smoke exposure | | | | | Tobacco smoke exposure | | | | |
| | Total | Never | Fetal | Infant | Fetal- and infant | Total | Never | Fetal | Infant | Fetal- and infant |
| Age 1 year | 1.21 (0.84, 1.74) | 1.09 (0.71, 1.68) | 1.38 (0.24, 7.97) | 2.22 (0.65, 7.59) | 1.96 (0.50, 7.64) | 1.07 (0.89, 1.29) | 1.00 (0.81, 1.24) | 1.35 (0.53, 3.45) | 1.32 (0.67, 2.60) | 1.49 (0.75, 2.97) |
| Age 2 years | 1.49 (0.83, 2.66) | 1.29 (0.65, 2.54) | 0.57 (0.04, 9.39) | 3.98 (0.54, 29.59) | 4.40 (0.56, 34.40) | 1.04 (0.83, 1.29) | 0.97 (0.75, 1.26) | 0.73 (0.25, 2.13) | 1.32 (0.60, 2.88) | 1.76 (0.84, 3.71) |
| Age 3 years | 0.90 (0.43, 1.91) | 0.59 (0.24, 1.43) | 0.39 (0.01, 19.83) | 4.07 (0.27, 60.76) | 3.80 (0.36, 40.54) | 0.97 (0.72, 1.30) | 0.86 (0.60, 1.21) | 0.40 (0.07, 2.20) | 0.88 (0.30, 2.60) | 2.34 (0.96, 5.67) |

Values are odds ratios (95% confidence interval) for wheezing at the ages of 1, 2 and 3 years per 10 µg/m³ increase of PM₁₀ or NO₂ in the total group and stratified for fetal and infant tobacco smoke exposure. *P < 0.05. Models are adjusted for maternal age, education, parity, history of asthma or atopy and children's sex, gestational age, birth weight, ethnicity, breastfeeding, daycare attendance, pet keeping and lower respiratory tract infections at the corresponding ages. Total analyses were additionally adjusted for maternal smoking and smoking of the partner. P-values for interaction PM₁₀* smoking: p-value = 0.35 (age 1), p-value = 0.20 (age 2), and p-value <0.05 (age 3). P-values for interaction NO₂* smoking: p-value = 0.23 (age 1), p-value = 0.14 (age 2), and p-value <0.05 (age 3).