

Note to Readers: If you need assistance accessing items in this Supplemental Material, please contact ehp508@niehs.nih.gov. Our staff will work with you to assess and meet your accessibility needs within 3 working days.

Table of Contents for Supplemental Material

Perinatal Exposure to Traffic-Related Air Pollution and Atopy at 1 Year of Age in a Multi-Center Canadian Birth Cohort Study

Hind Sbihi, Ryan W. Allen, Allan Becker, Jeffrey R. Brook, Piush Mandhane, James A. Scott, Malcolm R. Sears, Padmaja Subbarao, Tim K. Takaro, Stuart E. Turvey, and Michael Brauer

Table S1: LUR models for nitrogen dioxide (variables^a, estimated annual means for all participants and standard deviation (sd)).

Table S2: Particle Infiltration (Finf) variables; mapping questions used in the MESA-Air (Allen et al. 2012) and CHILD cohorts.

Table S3: Timetable of assessments in the Canadian Healthy Infant Longitudinal Development (CHILD) study used in the investigation of atopy in relation to traffic-related air pollution.

Table S4: Crude Odds Ratios (OR) and 95% Confidence Interval (95% CI) of sensitization to any, inhalant and food allergens in relation to participants' physical environment characteristics, maternal factors, and nutrition at different time points.

Table S5: Proportion of positive responses to individual allergen skin prick tests by CHILD city (in %).

Table S6: Adjusted Odds Ratios (aOR) for risk of atopy per 10 $\mu\text{g}/\text{m}^3$ increase in NO_2 exposures during pregnancy and the first year of life.

Figure S1: Adjusted OR of risk of atopy in CHILD families for a 10 $\mu\text{g}/\text{m}^3$ increase in NO_2 during the first year of life, stratified by presence of siblings in participants families (group with no siblings, n= 1085; group with sibling, n= 874). All models are adjusted for the same covariates as those used in the main analysis (Figure 1B).

Figure S2 - Adjusted Odds Ratio of risk of atopy for 10 $\mu\text{g}/\text{m}^3$ increase in NO_2 during the first year of life stratified by season (defined using weekly average of 18°C as cutoff to define cold and warm) and by home PM infiltration status (defined based on city-specific 80th percentile

predicted household PM infiltration efficiency; “leaky” homes: n= 687; “sealed” homes: n=824). All models are adjusted for the same covariates as in the main analysis (Figure 1B).

References