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Supplemental Material

Influence of the Urban Exposome on Birth Weight

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Supplementary material

Table S1. Variable removal. An exposure variable was removed if its proportion of missing values was >70%, if its variability was mainly due to between-cities variations (i.e. ratio of city-centered data vs. raw data standard deviation <30%), or if it was correlated at a level >0.99 with another exposure variable.

Removed exposure variables	Reason
UV Vitamine-D dose in T1, T2, T3 and over the full pregnancy	Absolute correlation with UV DNA damage at the corresponding exposure window >0.99
UV Erythemal in T1, T2, T3 and over the full pregnancy	Absolute correlation with UV DNA damage at the corresponding exposure window >0.99
Atmospheric pressure in T1, T2, T3 and over the full pregnancy	Ratio of city-centered data vs. raw data standard deviation <30%
Straight line distance to closest street	>70% missing values
Land surface temperature	>70% missing values

DNA, deoxyribonucleic acid; T1, first trimester 1 of pregnancy; T2, second trimester of pregnancy; T3, third trimester of pregnancy; UV, ultraviolet radiation.
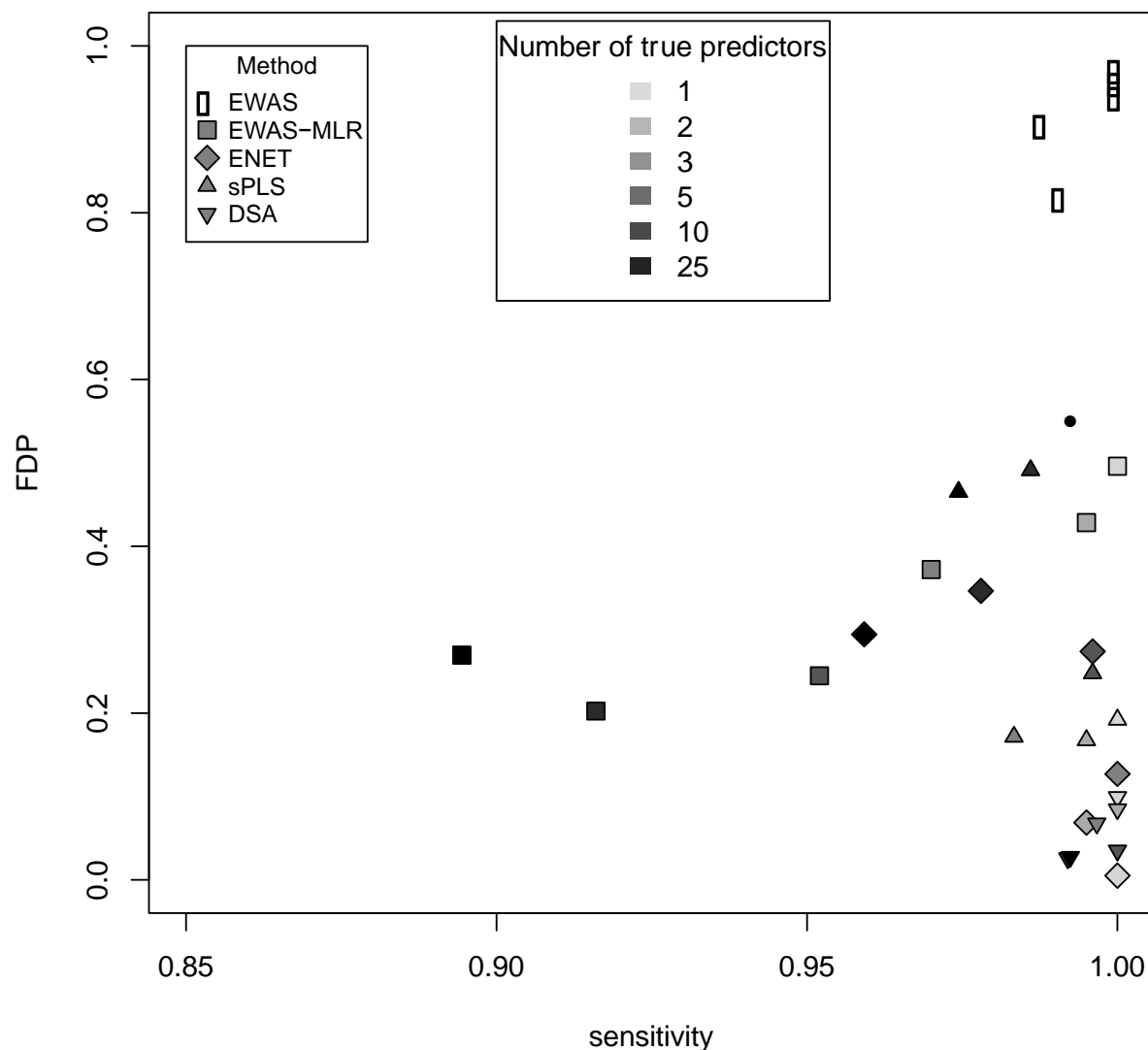
Figure S1. Sensitivity and false discovery proportion (FDP) values obtained by simulation when identifying associations between a set of 57 exposures (generated based on a realistic urban exposome correlation structure) and a continuous health outcome (generated such that it was linearly related to *p*=1, 2, 3, 5, 10 or 25 of these exposures), in a population of 32,000 subjects. For each statistical method that was tested and each scenario (i.e. with p=1, 2, 3, 5, 10 and 25 exposures influencing the outcome), the sensitivity and FDP were averaged over 100 simulation runs. DSA, deletion/substitution/addition; ENET, elastic net; EWAS, Environment-wide association study; EWAS-MLR, EWAS-multiple linear regression; FDP, false discovery proportion; sPLS, sparse partial least-squares.