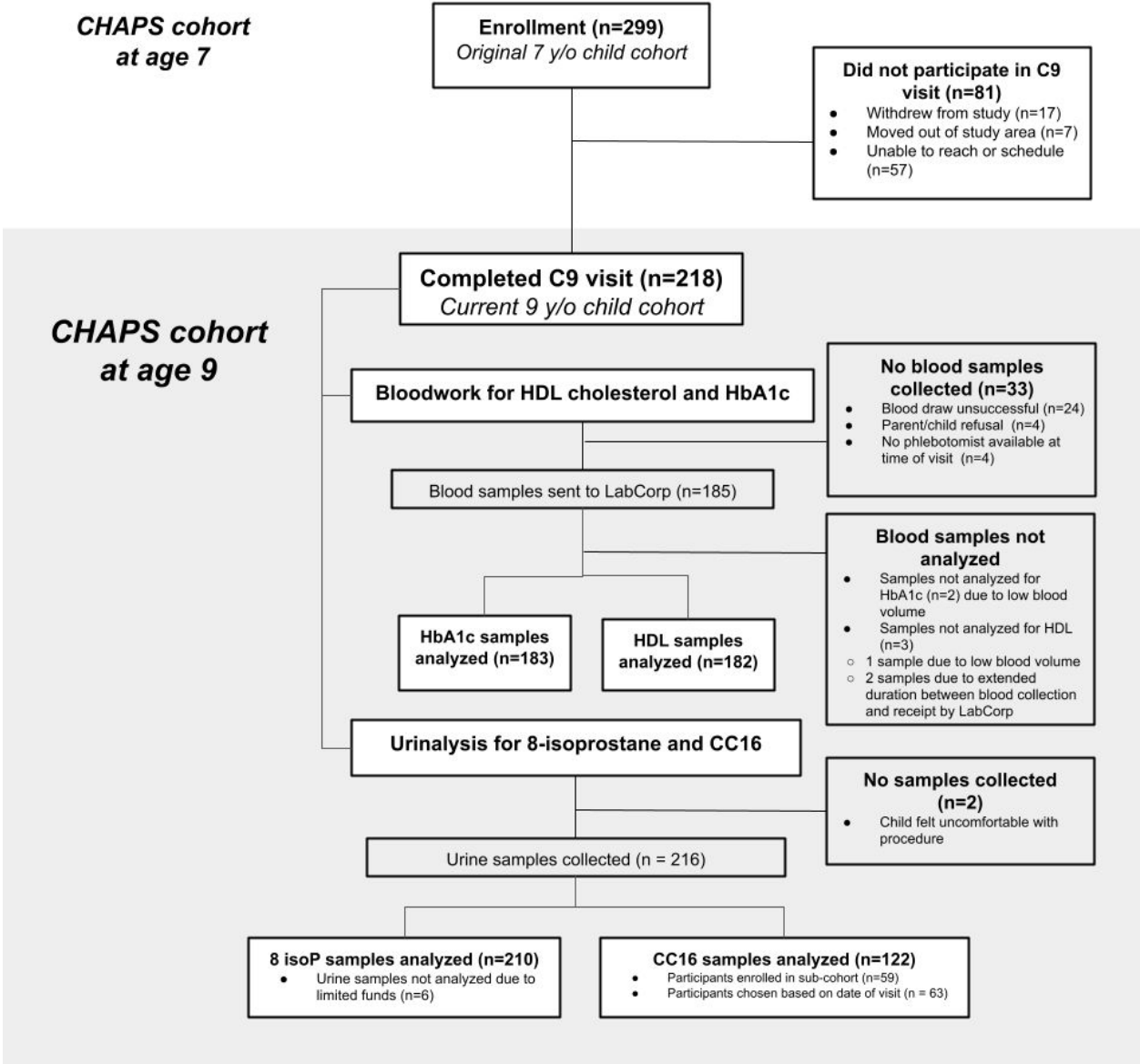
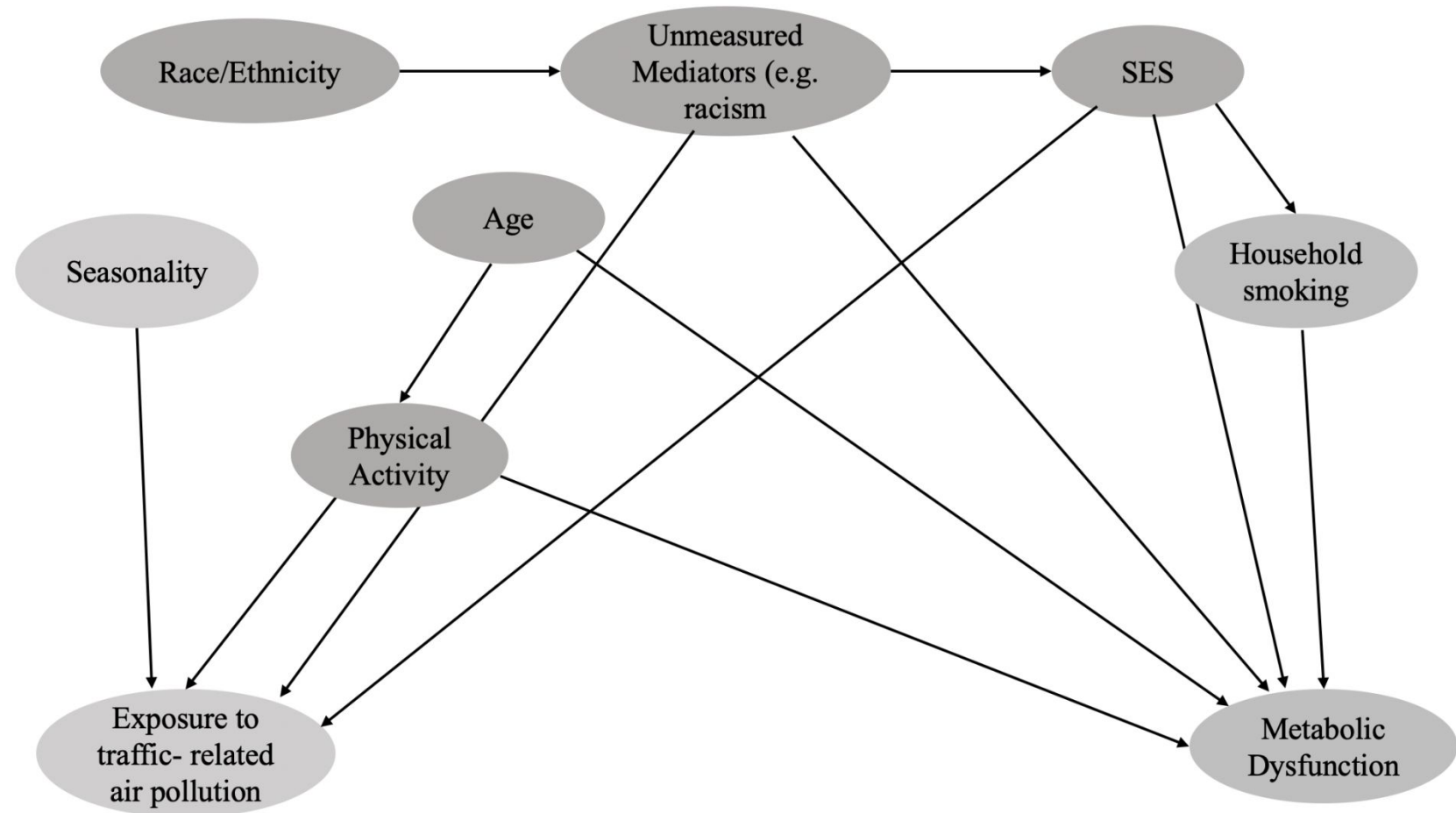


Supplemental Figure 1: Participant workflow diagram. From the 7-year-old child cohort from a previous study, this figure illustrates the number of participants that were retained for this 9-year-old child cohort study, as well as the number with bloodwork done for HDL cholesterol and urinalysis for 8-isoprostane (23).



Supplemental Fig 2: DAG (directed acyclic graph). Covariates variables to include in the regression model were determined using a directed acyclic graph.



Supplemental Table 1: Summary characteristics of air pollution exposure data. Median, 25th percentile, 75th percentile for pollutant exposures (NO₂, NO_x, PAH456, EC, CO, PM_{2.5})

Pollutant	1-day average	1-week average	1-month average	3-month average	6-month average	1-year average
NO ₂ (ppb) IQRs	7.31	7.92	8.98	8.48	8.72	8.30
25th %le	4.12	4.53	4.33	4.46	5.64	7.23
75th %le	13.54	14.58	14.05	13.75	11.65	9.40
NO _x (ppb) IQRs	14.59	17.06	16.59	16.00	16.38	17.15
25th %le	10.06	10.53	10.79	11.47	13.00	15.36
75th %le	23.16	23.89	25.48	24.03	21.69	18.84
PAH456 (ng/m ³) IQRs	10.22	10.84	10.47	9.72	9.50	9.47
25th %le	5.84	5.76	5.55	6.11	6.94	9.11
75th %le	13.50	13.70	13.95	13.99	12.18	9.90
EC (µg /m ³) IQRs	0.50	0.56	0.56	0.61	0.62	0.60
25th %le	0.29	0.37	0.38	0.41	0.51	0.55
75th %le	0.82	0.76	0.76	0.75	0.75	0.66
CO (ppm) IQRs	0.37	0.47	0.49	0.48	0.47	0.48
25th %le	0.20	0.21	0.23	0.26	0.35	0.45
75th %le	0.73	0.81	0.80	0.75	0.63	0.50
PM _{2.5} (µg /m ³) IQRs	11.10	11.57	13.58	15.31	16.43	15.35
25th %le	7.42	8.15	7.89	7.64	10.29	13.08
75th %le	19.27	22.88	24.37	21.37	20.13	16.70

Supplemental Table 2. Descriptive statistics for biomarkers of metabolic dysregulation, oxidative stress and lung epithelial damage.

Biomarker	N	Mean [SD]	Median (Q1, Q3)
High density lipoprotein (mg/dL)	182	51.29 [12.16]	50.0 (42.00, 60.00)
8-isoprostane : Creatinine ratio (ng/mg) ^a	210	6.20 [8.01]	4.52 (2.62, 7.57)
Club cell protein 16 (ng/mL) ^a	122	4.01 [6.55]	1.97 (0.75, 4.32)
Glycosylated hemoglobin A1c (%)	183	5.26 [0.30]	5.30 (5.10, 5.40)

^a 8-isoprostane and CC16 were not normally distributed and were logged for analysis.

Supplemental Table 3a: Outcomes Correlation Matrix

	8-isoprostane	CC16	HbA1c
HDL	-0.06	0.15	0.07
8-isoprostane		0.03	-0.05
CC16			0.12

Supplemental Table 3b: Exposure Correlations by Pollutant and Exposure Duration

1-Day Lag

	PM _{2.5}	NO ₂	NO _x	PAH456	EC
CO	0.79	0.85	0.81	0.81	0.58
PM _{2.5}		0.83	0.71	0.67	0.63
NO ₂			0.89	0.83	0.72
NO _x				0.83	0.64
PAH456					0.50

1-Month Average

	PM _{2.5}	NO ₂	NO _x	PAH456	EC
CO	0.91	0.96	0.93	0.95	0.67
PM _{2.5}		0.91	0.89	0.90	0.74
NO ₂			0.97	0.92	0.77
NO _x				0.92	0.70
PAH456					0.60

6-Month Average

	PM _{2.5}	NO ₂	NO _x	PAH456	EC
CO	0.94	0.95	0.88	0.98	0.66
PM _{2.5}		0.92	0.83	0.90	0.76
NO ₂			0.97	0.93	0.71
NO _x				0.87	0.61
PAH456					0.60

1-Week Average

	PM_{2.5}	NO₂	NO_x	PAH456	EC
CO	0.90	0.96	0.92	0.91	0.72
PM_{2.5}		0.93	0.90	0.84	0.77
NO₂			0.97	0.89	0.81
NO_x				0.91	0.74
PAH456					0.58

3-Month Average

	PM_{2.5}	NO₂	NO_x	PAH456	EC
CO	0.93	0.97	0.93	0.98	0.67
PM_{2.5}		0.93	0.90	0.91	0.78
NO₂			0.98	0.94	0.73
NO_x				0.92	0.67
PAH456					0.61

1-Year Average

	PM_{2.5}	NO₂	NO_x	PAH456	EC
CO	0.83	0.79	0.52	0.63	0.66
PM_{2.5}		0.72	0.39	0.57	0.55
NO₂			0.88	0.66	0.69
NO_x				0.47	0.55
PAH456					0.68