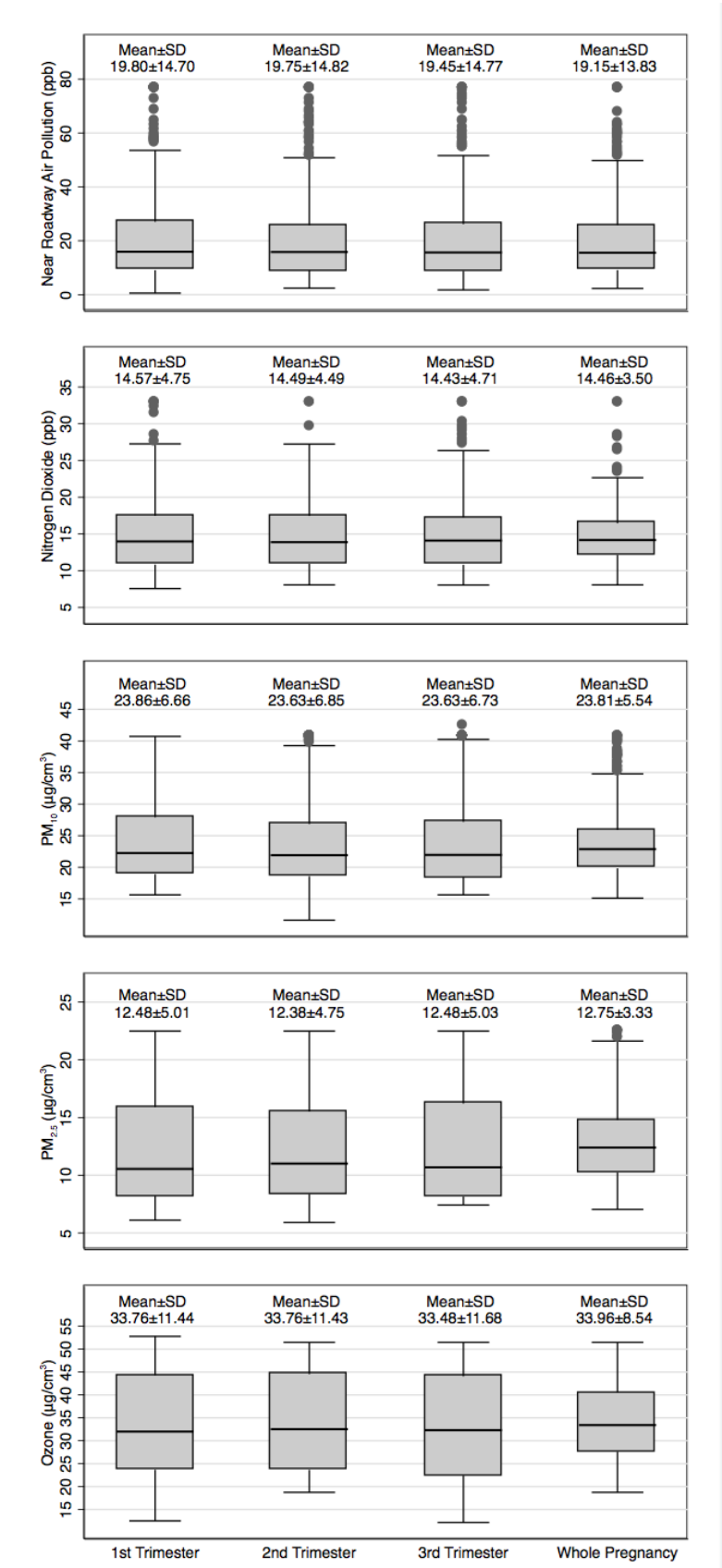

Supplemental Figure. Boxplot distribution of air pollutants by pregnancy period (n=606).

Supplemental Table 1. Demographic characteristics of CHARGE participants with and without complete exposure data (pollution and/or folic acid intake during month 1) (*n* = 766).

Demographic Variable	N (%) Complete data (n=606)	Incomplete data (n=160)	Chi-square *p*-value
Male sex	510 (84.2)	133 (83.1)	0.751
Child race/ethnicity			
White	315 (52.0)	93 (58.1)	
Hispanic	116 (19.1)	26 (16.3)	0.378
Other	175 (28.9)	41 (25.6)	
Child's Year of Birth			
1998 – 2001	156 (25.7)	56 (35.0)	
2002 – 2003	208 (34.3)	42 (26.3)	0.039
2004 – 2007	242 (39.9)	62 (38.8)	
Financial Hardship [a] (% yes)	99 (16.3)	28 (17.7)	0.677
Home Ownership (% yes)	439 (72.7)	112 (70.9)	0.653
Maximum education in home			
Some college or less	241 (39.8)	65 (40.6)	0.844
Bachelor degree	365 (60.2)	95 (59.4)	
Mother's Birthplace			
Born in USA	479 (79.0)	136 (85.0)	0.092
Born outside USA	127 (21.0)	24 (15.0)	
Maternal age ≥ 35 years	133 (22.0)	50 (31.3)	0.014
Gestational Diabetes (% yes)[b]	39 (6.5)	8 (5.0)	0.506
Prepregnancy BMI			
<25	349 (57.6)	84 (52.5)	
25 to <30	143 (23.6)	42 (26.3)	0.512
30+	114 (18.8)	34 (21.3)	
Preterm delivery (< 37 weeks)[c]	51 (8.6)	19 (12.0)	0.190
Interpregnancy interval[d,e]			
No prior pregnancy	270 (45.2)	83 (52.5)	
<1 year	60 (10.1)	19 (12.0)	0.073
1 to <4 years	193 (32.3)	34 (21.5)	
4+ years	74 (12.4)	22 (13.9)	
Parity[f]			
1	270 (44.7)	83 (52.2)	
2	223 (36.9)	58 (36.5)	0.148
3	79 (13.1)	12 (7.6)	
4+	32 (5.3)	6 (3.8)	
Prenatal vitamin use during 1st month of pregnancy[g]	339 (55.9)	89 (57.4)	0.741

Abbreviations: CHARGE, Childhood Autism Risk from Genetics and the Environment; [a] Self report of financial hardship during index period; [b] Missing 2 complete, 1 incomplete; [c] Missing 10 complete, 1 incomplete; [d] Number of days since previous pregnancy lasting 20 weeks or more; [e] Missing 10 complete, 1 incomplete; [f] Missing 3 complete; [g] Missing 4 incomplete.

Supplemental Table 2. Nutrient intake during 1st month of pregnancy of CHARGE cases with Autism spectrum disorder (ASD) and controls with typical development (n = 606).

Nutrient	Correlation with 1st month FA (Pearson R)[a]	Controls (n=260) (Med (IQR))	Cases (n=346) (Med (IQR))	Wilcoxon rank sum *p*-value
Folic acid	-	812.7 (188.9 - 1,026.6)	727.7 (146.9 - 962.2)	0.019
Vitamin C (missing 7 controls, 5 cases)	0.511	107.5 (6.2 - 123.1)	100.0 (3.0 - 121.9)	0.048
Zinc	0.895	19.0 (2.8 - 25.0)	15.6 (2.4 - 25.0)	0.145
Vitamin D (missing 3 controls, 3 cases)	0.561	400.0 (26.3 - 421.5)	354.3 (25.1 - 425.8)	0.615
Vitamin E (missing 1 controls, 1 cases)	0.459	23.3 (0.8 - 30.7)	20.5 (0.2 - 30.1)	0.045
Vitamin A	0.804	3,908.5 (559.4 - 4,363.4)	2,801.9 (349.9 - 4,287.0)	0.100
Vitamin B6	0.417	2.8 (0.7 - 4.4)	2.6 (0.5 - 3.3)	0.004
Vitamin B12	0.132	8.0 (1.7 - 10.6)	7.1 (1.3 - 9.7)	0.077
Calcium (missing 3 controls, 3 cases)	0.608	216.3 (86.3 - 302.6)	201.1 (53.4 - 314.3)	0.272
Iron (missing 11 controls, 11 cases)	0.812	28.3 (7.6 - 37.1)	23.7 (5.8 - 34.3)	0.069

Abbreviations: ASD, autism spectrum disorder; CHARGE, Childhood Autism Risk from Genetics and the Environment; FA, folic acid; IQR, interquartile range; Med, median.

[a] all Pearson correlation p-values <0.001 except Vitamin B12 (p=0.001)

Supplemental Table 3. Spearman correlations of near roadway air pollution (NRP) and regional pollutants for 606 ASD or typically developing children[a].

First Trimester	Total Pregnancy Estimates				
Estimates	NRP	NO_2	PM10	PM2.5	Ozone
NRP	0.883[b]	0.448[d]	0.132[d]	0.140[d]	-0.167[d]
NO_2	0.472[c]	0.613[b]	0.530[d]	0.535[d]	-0.155[d]
PM10	0.186[c]	0.583[c]	0.682[b]	0.666[d]	0.203[d]
PM2.5	0.261[c]	0.716[c]	0.666[c]	0.507[b]	0.000[d]
Ozone	-0.262[c]	-0.425[c]	-0.022[c]	-0.463[c]	0.561[b]

Abbreviations: NRP, near roadway air pollution; NO_2, nitrogen dioxide; PM2.5, particulate matter < 2.5μm; PM10, particulate matter <10μm.

[a] All correlation measures were statistically significant ($p \leq .001$) except ozone and PM_{10} during the first trimester (p=0.585) and ozone and $PM_{2.5}$ during the whole pregnancy period (p=0.992). [b] Correlations of the same pollutant across time periods. [c] Correlations across pollutants within the first trimester. [d] Correlations across pollutants within pregnancy.

Supplemental Table 4. Unadjusted main effects of air pollutants on Autism spectrum disorder (ASD) risk in CHARGE cases with ASD and controls with typical development (*n* = 606).

Pollutant	Variable type[a, b]	Trimester 1 OR (95% CI)	Trimester 2 OR (95% CI)	Trimester 3 OR (95% CI)	Whole Pregnancy OR (95% CI)
NRP	Continuous (2 SD scale)	1.27 (0.91, 1.76)	1.23 (0.88, 1.70)	1.47 (1.05, 2.06)	1.31 (0.94, 1.82)
	Binary: ≥ Med (ref: < Med)	1.16 (0.84, 1.60)	1.42 (1.03, 1.96)	1.36 (0.99, 1.88)	1.43 (1.03, 1.97)
NO_2	Continuous (2 SD scale)	1.36 (0.98, 1.89)	1.27 (0.91, 1.75)	1.33 (0.96, 1.85)	1.46 (1.05, 2.04)
	Binary: ≥ Med (ref: < Med)	1.24 (0.90, 1.71)	1.14 (0.83, 1.58)	1.09 (0.79, 1.51)	1.58 (1.15, 2.19)
PM_{10}	Continuous (2 SD scale)	1.31 (0.94, 1.81)	1.44 (1.03, 2.00)	1.37 (0.98, 1.90)	1.54 (1.10, 2.15)
	Binary: ≥ Med (ref: < Med)	1.23 (0.89, 1.70)	1.24 (0.90, 1.72)	1.35 (0.97, 1.87)	1.04 (0.76, 1.44)
$PM_{2.5}$	Continuous (2 SD scale)	1.24 (0.89, 1.71)	1.19 (0.86, 1.64)	1.30 (0.93, 1.79)	1.62 (1.16, 2.25)
	Binary: ≥ Med (ref: < Med)	1.25 (0.90, 1.74)	1.03 (0.74, 1.43)	1.20 (0.86, 1.67)	1.37 (0.99, 1.89)
Ozone	Continuous (2 SD scale)	1.24 (0.90, 1.71)	1.29 (0.93, 1.78)	1.27 (0.92, 1.75)	1.40 (1.01, 1.93)
	Binary: ≥ Med (ref: < Med)	1.02 (0.74, 1.40)	1.06 (0.77, 1.47)	1.13 (0.82, 1.56)	1.21 (0.88, 1.67)

Abbreviations: ASD, autism spectrum disorder; FA, folic acid; NRP, near roadway air pollution; NO_2, nitrogen dioxide; $PM_{2.5}$, particulate matter < 2.5 μm; PM_{10}, particulate matter < 10 μm.

[a] Continuous air pollution effects reflect risk of autism based on 2 SDs from the mean value, for each pollutant at each time period, as reflected in Supplemental Figure. [b] Binary air pollutants were dichotomized at their whole pregnancy period median (high vs low) (NRP = 15.58 ppb; NO_2 = 14.18 ppb; PM_{10} = 22.88 μg/cm^3; $PM_{2.5}$ = 12.40 μg/cm^3; Ozone = 33.41 μg/cm^3).

Supplemental Table 5. Risk of ASD for 606 Children based on Continuous Pollutant Exposure by Periconceptional Folic Acid Intake[a]

Air pollutant	Month 1 FA (< or ≥ 800 μg)	Adjusted Odds Ratio (95% CI)[b,c] 2nd Trimester	3rd Trimester	Whole Pregnancy
NRP	Low	1.32 (0.77, 2.26)	1.45 (0.86, 2.46)	1.45 (0.85, 2.47)
	High	1.00 (0.65, 1.56)	1.33 (0.84, 2.12)	1.05 (0.67, 1.65)
	Interaction p	0.436	0.810	0.366
NO_2	Low	1.25 (0.73, 2.14)	1.04 (0.64, 1.71)	1.40 (0.81, 2.42)
	High	0.88 (0.57, 1.38)	1.19 (0.74, 1.92)	0.89 (0.56, 1.42)
	Interaction p	0.326	0.698	0.210
PM_{10}	Low	1.47 (0.88, 2.45)	1.18 (0.72, 1.94)	1.38 (0.82, 2.32)
	High	1.22 (0.77, 1.93)	1.28 (0.79, 2.06)	1.23 (0.77, 1.98)
	Interaction p	0.591	0.821	0.748
$PM_{2.5}$	Low	0.99 (0.60, 1.63)	0.98 (0.61, 1.59)	1.09 (0.64, 1.84)
	High	1.07 (0.68, 1.70)	1.33 (0.82, 2.16)	1.33 (0.83, 2.13)
	Interaction p	0.808	0.381	0.572
Ozone	Low	1.18 (0.73, 1.91)	1.25 (0.76, 2.05)	1.23 (0.75, 2.01)
	High	1.00 (0.62, 1.62)	0.93 (0.58, 1.47)	0.99 (0.61, 1.59)
	Interaction p	0.628	0.385	0.522

Abbreviations: ASD, autism spectrum disorder; FA, folic acid; NRP, near roadway air pollution; NO_2, nitrogen dioxide; $PM_{2.5}$, particulate matter < 2.5 μm; PM_{10}, particulate matter < 10 μm.

[a] Folic acid intake is dichotomized at 800 μg (high vs. low) and includes all folic acid intake during the first month of pregnancy. [b] Air pollution effects reflect risk of autism based on 2 SDs from the mean value, for each pollutant at each time period, as reflected in Supplemental Figure. [c] Model was adjusted for self-reported financial hardship between 3 months before pregnancy to time of interview (yes/no), child's year of birth, vitamin A and zinc intake during the first month of pregnancy.

Supplemental Table 6. Joint associations between ASD, folic acid (FA) intake[a] and air pollution (near roadway air pollution (NRP) and regional pollutants)[b] during the whole pregnancy period. N=606

				Unadjusted Model	Adjusted Model[c]					
						Additive interaction			Multiplicative Interaction	
Poll. < or ≥ median		FA < or ≥ 800 μg	N ASD/ Control	OR (95% CI)	OR (95% CI)	Expected Joint OR	RERI p-value	AP p-value	Expected Joint OR	Interaction p-value
NRP	Low	High	76/79	1.0 (ref)	1.0 (ref)					
		Low	85/65	1.36 (0.87, 2.13)	1.17 (0.59, 2.32)					
	High	High	90/72	1.30 (0.84, 2.02)	1.21 (0.76, 1.91)					
		Low	95/44	2.24 (1.39, 3.61)	1.63 (0.80, 3.34)	1.38	0.564	0.539	1.42	0.673
NO_2	Low	High	78/84	1.0 (ref)	1.0 (ref)					
		Low	78/63	1.33 (0.85, 2.10)	1.07 (0.54, 2.13)					
	High	High	88/67	1.41 (0.91, 2.20)	1.11 (0.70, 1.77)					
		Low	102/46	2.39 (1.50, 3.80)	1.48 (0.74, 2.94)	1.18	0.463	0.435	1.19	0.532
PM_{10}	Low	High	91/78	1.0 (ref)	1.0 (ref)					
		Low	81/54	1.29 (0.81, 2.03)	1.01 (0.51, 1.98)					
	High	High	75/73	0.88 (0.57, 1.37)	0.82 (0.51, 1.30)					
		Low	99/55	1.54 (0.99, 2.41)	1.15 (0.60, 2.21)	0.83	0.312	0.305	0.83	0.328
$PM_{2.5}$	Low	High	85/92	1.0 (ref)	1.0 (ref)					
		Low	77/50	1.67 (1.05, 2.65)	1.38 (0.70, 2.73)					
	High	High	81/59	1.49 (0.95, 2.32)	1.23 (0.77, 1.97)					
		Low	103/59	1.89 (1.22, 2.92)	1.27 (0.65, 2.48)	1.61	0.448	0.458	1.70	0.394
Ozone	Low	High	86/78	1.0 (ref)	1.0 (ref)					
		Low	80/59	1.23 (0.78, 1.94)	0.94 (0.48, 1.83)					
	High	High	80/73	0.99 (0.64, 1.55)	0.76 (0.48, 1.22)					
		Low	100/50	1.81 (1.15, 2.87)	1.17 (0.60, 2.27)	0.70	0.135	0.118	0.71	0.153

Abbreviations: ASD, autism spectrum disorder; FA, folic acid; NRP, near roadway air pollution; NO_2, nitrogen dioxide; $PM_{2.5}$, particulate matter < 2.5 μm; PM_{10}, particulate matter < 10 μm; Preg, pregnancy.

[a] Folic acid intake is dichotomized at 800 μg (high vs. low) and includes all folic acid intake during the first month of pregnancy. [b] All pollutants were dichotomized at their whole pregnancy period median (high vs low) (NRP = 15.58 ppb; NO_2 = 14.18 ppb; PM_{10} = 22.88 $\mu g/cm^3$; $PM_{2.5}$ = 12.40 $\mu g/cm^3$; Ozone = 33.41 $\mu g/cm^3$). [c] Model was adjusted for self-reported financial hardship between 3 months before pregnancy to time of interview (yes/no), child's year of birth, vitamin A and zinc intake during the first month of pregnancy.

Supplemental Table 7. Joint associations between ASD, folic acid (FA) intake[a] and air pollution (near roadway air pollution (NRP) and regional pollutants)[b] during the second trimester of pregnancy. N=606

Poll. < or ≥ median		FA < or ≥ 800 μg	N ASD/ Control	Unadjusted Model	Adjusted Model[c]					
						Additive interaction			Multiplicative Interaction	
				OR (95% CI)	OR (95% CI)	Expected Joint OR	RERI p-value	AP p-value	Expected Joint OR	Interaction p-value
NRP	Low	High	78/77	1.0 (ref)	1.0 (ref)					
		Low	78/63	1.22 (0.77, 1.93)	1.06 (0.53, 2.12)					
	High	High	88/74	1.17 (0.76, 1.83)	1.15 (0.72, 1.81)					
		Low	102/46	2.19 (1.37, 3.50)	1.61 (0.80, 3.25)	1.21	0.334	0.286	1.22	0.410
NO_2	Low	High	86/74	1.0 (ref)	1.0 (ref)					
		Low	86/64	1.16 (0.74, 1.81)	0.91 (0.46, 1.78)					
	High	High	80/77	0.89 (0.58, 1.39)	0.79 (0.50, 1.25)					
		Low	94/45	1.80 (1.12, 2.88)	1.21 (0.61, 2.40)	0.70	0.108	0.087	0.72	0.128
PM_{10}	Low	High	97/93	1.0 (ref)	1.0 (ref)					
		Low	91/62	1.41 (0.92, 2.16)	1.10 (0.57, 2.15)					
	High	High	69/58	1.14 (0.73, 1.79)	1.08 (0.68, 1.72)					
		Low	89/47	1.82 (1.15, 2.86)	1.35 (0.70, 2.61)	1.18	0.662	0.653	1.19	0.711
$PM_{2.5}$	Low	High	109/92	1.0 (ref)	1.0 (ref)					
		Low	100/67	1.26 (0.83, 1.91)	0.97 (0.51, 1.85)					
	High	High	57/59	0.82 (0.52, 1.29)	0.73 (0.46, 1.18)					
		Low	80/42	1.61 (1.01, 2.56)	1.15 (0.58, 2.28)	0.70	0.162	0.138	0.71	0.170
Ozone	Low	High	92/82	1.0 (ref)	1.0 (ref)					
		Low	89/58	1.37 (0.88, 2.13)	1.05 (0.55, 2.00)					
	High	High	74/69	0.96 (0.61, 1.49)	0.78 (0.49, 1.25)					
		Low	91/51	1.59 (1.01, 2.50)	1.13 (0.58, 2.19)	0.83	0.355	0.340	0.82	0.347

Abbreviations: AP, attributable proportion due to interaction; ASD, autism spectrum disorder; FA, folic acid; NO_2, nitrogen dioxide; NRP, near roadway pollution; $PM_{2.5}$, particulate matter < 2.5 μm; PM_{10}, particulate matter < 10 μm; RERI, relative excess risk due to interaction.
[a] Folic acid intake is dichotomized at 800 μg (high vs. low) and includes all folic acid intake during the first month of pregnancy. [b] All pollutants were dichotomized at their whole pregnancy period median (high vs low) (NRP = 15.58 ppb; NO_2 = 14.18 ppb; PM_{10} = 22.88 $\mu g/cm^3$; $PM_{2.5}$ = 12.40 $\mu g/cm^3$; Ozone = 33.41 $\mu g/cm^3$). [c] Model was adjusted for self-reported financial hardship between 3 months before pregnancy to time of interview (yes/no), child's year of birth, vitamin A and zinc intake during the first month of pregnancy.

Supplemental Table 8. Joint associations between ASD, folic acid (FA) intake[a] and air pollution (near roadway air pollution (NRP) and regional pollutants)[b] during the third trimester of pregnancy. N=606

				Unadjusted Model	Adjusted Model[c]					
						Additive interaction			Multiplicative Interaction	
Poll. < or ≥ median		FA < or ≥ 800 μg	N ASD/ Control	OR (95% CI)	OR (95% CI)	Expected Joint OR	RERI p-value	AP p-value	Expected Joint OR	Interaction p-value
NRP	Low	High	75/81	1.0 (ref)	1.0 (ref)					
		Low	86/60	1.55 (0.98, 2.44)	1.38 (0.70, 2.74)					
	High	High	91/70	1.40 (0.90, 2.19)	1.39 (0.88, 2.20)					
		Low	94/49	2.07 (1.30, 3.30)	1.53 (0.77, 3.07)	1.77	0.618	0.630	1.92	0.512
NO_2	Low	High	77/85	1.0 (ref)	1.0 (ref)					
		Low	95/50	2.10 (1.32, 3.33)	1.74 (0.87, 3.47)					
	High	High	89/66	1.49 (0.96, 2.32)	1.33 (0.84, 2.11)					
		Low	85/59	1.59 (1.01, 2.50)	1.17 (0.60, 2.30)	2.07	0.111	0.105	2.31	0.047
PM_{10}	Low	High	92/92	1.0 (ref)	1.0 (ref)					
		Low	93/66	1.41 (0.92, 2.16)	1.12 (0.59, 2.14)					
	High	High	74/59	1.25 (0.80, 1.96)	1.21 (0.76, 1.93)					
		Low	87/43	2.02 (1.27, 3.22)	1.53 (0.78, 2.98)	1.33	0.666	0.650	1.36	0.744
$PM_{2.5}$	Low	High	102/100	1.0 (ref)	1.0 (ref)					
		Low	101/64	1.55 (1.02, 2.35)	1.24 (0.64, 2.39)					
	High	High	64/51	1.23 (0.78, 1.95)	1.13 (0.70, 1.82)					
		Low	79/45	1.72 (1.09, 2.72)	1.27 (0.65, 2.46)	1.37	0.820	0.822	1.40	0.789
Ozone	Low	High	89/85	1.0 (ref)	1.0 (ref)					
		Low	88/56	1.50 (0.96, 2.35)	1.10 (0.58, 2.10)					
	High	High	77/66	1.11 (0.72, 1.74)	0.88 (0.55, 1.41)					
		Low	92/53	1.66 (1.06, 2.60)	1.17 (0.60, 2.28)	0.98	0.594	0.585	0.97	0.589

Abbreviations: AP, attributable proportion due to interaction; ASD, autism spectrum disorder; FA, folic acid; NO_2, nitrogen dioxide; NRP, near roadway pollution; $PM_{2.5}$, particulate matter < 2.5 μm; PM_{10}, particulate matter < 10 μm; RERI, relative excess risk due to interaction.
[a] Folic acid intake is dichotomized at 800 μg (high vs. low) and includes all folic acid intake during the first month of pregnancy. [b] All pollutants were dichotomized at their whole pregnancy period median (high vs low) (NRP = 15.58 ppb; NO_2 = 14.18 ppb; PM_{10} = 22.88 $\mu g/cm^3$; $PM_{2.5}$ = 12.40 $\mu g/cm^3$; Ozone = 33.41 $\mu g/cm^3$). [c] Model was adjusted for self-reported financial hardship between 3 months before pregnancy to time of interview (yes/no), child's year of birth, vitamin A and zinc intake during the first month of pregnancy.

Supplemental Table 9. Joint associations between ASD, folic acid (FA) intake[a] and air pollution (near roadway air pollution (NRP) and regional pollutants dichotomized at the 75th percentile)[b] during the first trimester of pregnancy. N=606

				Unadjusted Model	Adjusted Model[c]					
						Additive interaction			Multiplicative Interaction	
Poll. < or ≥ 75th percentile		FA < or ≥ 800 μg	N ASD/ Control	OR (95% CI)	OR (95% CI)	Expected Joint OR	RERI p-value	AP p-value	Expected Joint OR	Interaction p-value
NRP	Low	High	125/106	1.0 (ref)	1.0 (ref)					
		Low	122/88	1.18 (0.81, 1.71)	0.97 (0.53, 1.78)					
	High	High	41/45	0.77 (0.47, 1.27)	0.72 (0.43, 1.21)					
		Low	58/21	2.34 (1.34, 4.11)	1.70 (0.79, 3.66)	0.69	0.058	0.002	0.70	0.026
NO_2	Low	High	116/108	1.0 (ref)	1.0 (ref)					
		Low	118/83	1.32 (0.90, 1.94)	1.01 (0.54, 1.89)					
	High	High	50/43	1.08 (0.67, 1.76)	0.85 (0.51, 1.42)					
		Low	62/26	2.22 (1.31, 3.76)	1.48 (0.71, 3.07)	0.86	0.163	0.077	0.86	0.156
PM_{10}	Low	High	118/106	1.0 (ref)	1.0 (ref)					
		Low	114/77	1.33 (0.90, 1.97)	1.05 (0.56, 1.95)					
	High	High	48/45	0.96 (0.59, 1.56)	0.85 (0.51, 1.40)					
		Low	66/32	1.85 (1.13, 3.05)	1.33 (0.66, 2.68)	0.90	0.264	0.199	0.89	0.270
$PM_{2.5}$	Low	High	117/112	1.0 (ref)	1.0 (ref)					
		Low	117/78	1.44 (0.98, 2.11)	1.16 (0.62, 2.15)					
	High	High	49/39	1.20 (0.73, 1.97)	1.08 (0.65, 1.80)					
		Low	63/31	1.95 (1.18, 3.21)	1.41 (0.69, 2.89)	1.24	0.709	0.695	1.25	0.754
Ozone	Low	High	111/112	1.0 (ref)	1.0 (ref)					
		Low	115/76	1.53 (1.03, 2.26)	1.18 (0.63, 2.21)					
	High	High	55/39	1.42 (0.87, 2.32)	1.26 (0.76, 2.09)					
		Low	65/33	1.99 (1.21, 3.26)	1.42 (0.72, 2.80)	1.44	0.982	0.982	1.49	0.917

Abbreviations: AP, attributable proportion due to interaction; ASD, autism spectrum disorder; FA, folic acid; NO_2, nitrogen dioxide; NRP, near roadway pollution; $PM_{2.5}$, particulate matter < 2.5 μm; PM_{10}, particulate matter < 10 μm; RERI, relative excess risk due to interaction.
[a] Folic acid intake is dichotomized at 800 μg (high vs. low) and includes all folic acid intake during the first month of pregnancy. [b] All pollutants were dichotomized at their whole pregnancy period 75th percentile (high vs low) (NRP = 25.87 ppb; NO_2 = 16.47 ppb; PM_{10} = 25.90 μg/cm^3; $PM_{2.5}$ = 14.80 μg/cm^3; Ozone = 40.59 μg/cm^3). [c] Model was adjusted for self-reported financial hardship between 3 months before pregnancy to time of interview (yes/no), child's year of birth, vitamin A and zinc intake during the first month of pregnancy.

Supplemental Table 10. Joint associations between ASD, folic acid (FA) intake[a] and air pollution (near roadway air pollution (NRP) and regional pollutants dichotomized at the 75th percentile)[b] during the whole pregnancy period. N=606

				Unadjusted Model	Adjusted Model[c]					
Poll. < or ≥ 75th percentile		FA < or ≥ 800 μg	N ASD/ Control	OR (95% CI)	OR (95% CI)	Additive interaction Expected Joint OR	RERI p-value	AP p-value	Multiplicative Interaction Expected Joint OR	Interaction p-value
NRP	Low	High	123/111	1.0 (ref)	1.0 (ref)					
		Low	132/88	1.35 (0.93, 1.96)	1.10 (0.60, 2.03)					
	High	High	43/40	0.97 (0.59, 1.60)	0.93 (0.56, 1.56)					
		Low	48/21	2.06 (1.16, 3.66)	1.47 (0.68, 3.18)	1.03	0.378	0.287	1.02	0.376
NO_2	Low	High	120/118	1.0 (ref)	1.0 (ref)					
		Low	130/87	1.47 (1.01, 2.13)	1.13 (0.61, 2.09)					
	High	High	46/33	1.37 (0.82, 2.29)	0.97 (0.56, 1.68)					
		Low	50/22	2.23 (1.27, 3.92)	1.38 (0.64, 2.97)	1.10	0.547	0.505	1.10	0.565
PM_{10}	Low	High	123/123	1.0 (ref)	1.0 (ref)					
		Low	122/88	1.39 (0.96, 2.01)	1.04 (0.56, 1.94)					
	High	High	43/28	1.54 (0.90, 2.63)	1.37 (0.79, 2.39)					
		Low	58/21	2.76 (1.58, 4.83)	1.99 (0.96, 4.11)	1.41	0.392	0.293	1.42	0.422
$PM_{2.5}$	Low	High	124/126	1.0 (ref)	1.0 (ref)					
		Low	124/80	1.57 (1.08, 2.29)	1.31 (0.71, 2.43)					
	High	High	42/25	1.71 (0.98, 2.97)	1.38 (0.78, 2.46)					
		Low	56/29	1.96 (1.18, 3.28)	1.26 (0.62, 2.56)	1.69	0.419	0.459	1.81	0.365
Ozone	Low	High	127/120	1.0 (ref)	1.0 (ref)					
		Low	125/82	1.44 (0.99, 2.09)	1.12 (0.61, 2.07)					
	High	High	39/31	1.19 (0.70, 2.03)	0.94 (0.54, 1.63)					
		Low	55/27	1.92 (1.14, 3.25)	1.31 (0.64, 2.68)	1.06	0.562	0.530	1.05	0.576

Abbreviations: AP, attributable proportion due to interaction; ASD, autism spectrum disorder; FA, folic acid; NO_2, nitrogen dioxide; NRP, near roadway pollution; $PM_{2.5}$, particulate matter < 2.5 μm; PM_{10}, particulate matter < 10 μm; RERI, relative excess risk due to interaction.
[a] Folic acid intake is dichotomized at 800 μg (high vs. low) and includes all folic acid intake during the first month of pregnancy. [b] All pollutants were dichotomized at their whole pregnancy period 75th percentile (high vs low) (NRP = 25.87 ppb; NO_2 = 16.47 ppb; PM_{10} = 25.90 μg/cm^3; $PM_{2.5}$ = 14.80 μg/cm^3; Ozone = 40.59 μg/cm^3). [c] Model was adjusted for self-reported financial hardship between 3 months before pregnancy to time of interview (yes/no), child's year of birth, vitamin A and zinc intake during the first month of pregnancy.