Supplemental Table 1: Maternal characteristics by exposure variables, Collaborative Perinatal Project (USA, 1959-1973, N= 47,977[*]).

Characteristic	Early Childhood exposure	No exposure in early childhood	Mid childhood exposure	No exposure in mid childhood	Puberty exposure	No exposure in puberty	Adult exposure	No exposure as adult	Pregnancy exposure to fluorinated anesthetics	No pregnancy exposure
	N= 4600	N= 42885	N= 3944	N= 43541	N=7225	N=40260	N=7812	N=39673	N=410	N=46454
	Mean (SD) or N (%)	Mean (SD) or N (%)	Mean (SD) or N (%)	Mean (SD) or N (%)	Mean (SD) or N (%)	Mean (SD) or N (%)	Mean (SD) or N (%)	Mean (SD) or N (%)	Mean (SD) or N (%)	Mean (SD) or N (%)
Maternal years' education	11.9 (2.4)[b]	10.5 (2.5)	11.4 (2.4)[b]	10.6 (2.5)	11.0 (2.4)[b]	10.5 (2.6)	10.9 (2.6)[b]	10.6 (2.5)	10.3 (2.3)[b]	10.6 (2.6)
Maternal birth year	1938 (5.7)[b]	1937 (6.5)	1938 (6.1)[a]	1937 (6.4)	1938 (6.1)[b]	1938 (6.5)	1934 (6.3)[b]	1938 (6.2)	1939 (6.4)[b]	1937 (6.4)
Maternal parity										
0	1642 (36%)[b]	12547 (29%)	1283 (33%)[b]	12906 (30%)	2197 (30%)[b]	11992 (30%)	1358 (17%)[b]	12831 (32%)	109 (30%)	13861 (30%)
1	1221 (27%)	9615 (22%)	974 (25%)	9862 (23%)	1761 (24%)	9075 (23%)	1516 (19%)	9320 (24%)	75 (18%)	10572 (23%)
2	727 (16%)	7073 (17%)	663 (17%)	7137 (16%)	1230 (17%)	6570 (16%)	1437 (18%)	6363 (16%)	77 (19%)	7625 (16%)
3+	1002 (22%)	13589 (32%)	1018 (26%)	13573 (31%)	2030 (28%)	12561 (31%)	3487 (45%)	11104 (28%)	149 (36%)	14309 (31%)
Maternal race/ethnicity										
White	3687 (80%)[b]	17738 (42%)	2792 (71%)[b]	19551 (43%)	4466 (62%)[b]	16959 (42%)	4565 (58%)[b]	16860 (43%)	96 (23%)[b]	21138 (46%)
Black	827 (18%)	21933 (51%)	1024 (26%)	22373 (49%)	2436 (34%)	20234 (50%)	2870 (37%)	19890 (50%)	305 (74%)	22137 (48%)
Asian	7 (0.2%)	174 (0.4%)	4 (0.1%)	201 (0.4%)	18 (0.3)	163 (0.4)	29 (0.4%)	152 (0.4%)	0 (0%)	178 (0.4%)
Puerto Rican	62 (1%)	2830 (7%)	98 (2%)	3009 (7%)	257 (4%)	2635 (7%)	306 (4%)	2586 (7%)	7 (2%)	2777 (6%)
Other	17 (0.4%)	210 (0.5%)	26 (1%)	223 (1%)	48 (1%)	179 (0.4%)	42 (1%)	185 (0.5%)	2 (0.5%)	224 (0.5%)
Maternal cigarettes smoked at time of enrollment (per day)	7.5 (10.2)[b]	5.4 (8.8)	7.2 (9.8)[b]	5.5 (8.8)	7.2 (10.0)[b]	5.3 (8.7)	7.2 (10.2)[b]	5.3 (8.6)	5.8 (9.2)	5.6 (8.9)
Study Site										
Children's Medical Center in Boston, Massachusetts	1950 (42%)[b]	8556 (20%)	1419 (36%)[b]	9087 (21%)	2144 (30%)[b]	8362 (21%)	2372 (30%)[b]	8134 (21%)	36 (9%)[b]	10350 (22%)
Children's Hospital, SUNY, Buffalo	496 (11%)	1725 (4%)	330 (8%)	1891 (4%)	489 (7%)	1732 (4%)	625 (8%)	1596 (4%)	10 (2%)	2200 (5%)
Charity Hospital, New Orleans	57 (1%)	2300 (5%)	99 (3%)	2258 (5%)	198 (3%)	2159 (5%)	238 (3%)	2119 (5%)	1 (0.2%)	2341 (5%)
Columbia University-Presbyterian	163 (4%)	1704 (4%)	132 (3%)	1735 (4%)	276 (4%)	1591 (4%)	348 (4%)	1519 (4%)	10 (2%)	1652 (4%)
Johns Hopkins Hospital	194 (4%)	3415 (8%)	172 (4%)	3437 (8%)	475 (7%)	3134 (8%)	599 (8%)	3010 (8%)	67 (16%)	3516 (8%)
Medical College of Virginia (Richmond)	97 (2%)	2700 (6%)	100 (3%)	2705 (6%)	288 (4%)	2517 (6%)	396 (5%)	2409 (6%)	22 (5%)	2880 (6%)
University of Minnesota	383 (8%)	2342 (5%)	345 (9%)	2380 (5%)	605 (8%)	2120 (5%)	564 (7%)	2161 (5%)	9 (2%)	2716 (6%)
New York Medical College	108 (2%)	3381 (8%)	146 (4%)	3343 (8%)	312 (4%)	3177 (8%)	393 (5%)	3096 (8%)	1 (0.2%)	3420 (7%)

University of Oregon Medical School	318 (7%)	2520 (6%)	261 (7%)	2577 (6%)	493 (7%)	2345 (6%)	466 (6%)	2372 (6%)	14 (3%)	2809 (6%)
Pennsylvania Hospital/ Children's Hospital of Pennsylvania	343 (7%)	8079 (19%)	508 (13%)	7914 (18%)	1089 (15%)	7333 (18%)	911 (12%)	7511 (19%)	212 (52%)	7999 (17%)
Providence Lying-in	438 (10%)	2936 (7%)	367 (9%)	3007 (7%)	678 (9%)	2696 (7%)	612 (8%)	2762 (7%)	6 (1%)	3360 (7%)
University of Tennessee College of Medicine	53 (1%)	3219 (8%)	65 (2%)	3207 (7%)	178 (2%)	3094 (8%)	288 (4%)	2984 (8%)	22 (5%)	3302 (7%)

[a] Denotes significance at the .05 level.

[b] Denotes significance at the .001 level.

* N may not add up to 47,977 due to missing data.

Supplemental Table 2. Pregnancy Exposure to Fluorinated Anesthestics versus Other Anesthetics and Global Cognitive Ability and Educational (Continuous) Outcomes

	Unadjusted β	95% Lower CL	95% Upper CL	Adjusted β***	95% Lower CL	95% Upper CL
Bayley-Motor Development	0.18	-0.28	0.64	-0.31	-0.78	0.16
Bayley- Mental Development	-0.11	-0.73	0.51	-0.54	-1.18	0.09
Stanford-Binet IQ	-0.25	-1.86	1.35	-0.16	-1.69	1.38
WISC- Total IQ	**-1.80**	**-3.07**	**-0.53**	-0.28	-1.51	0.94
WISC-Performance IQ	**-1.92**	**-3.34**	**-0.49**	-0.50	-1.90	0.91
WISC-Verbal IQ	**-1.78**	**-3.02**	**-0.54**	-0.26	-1.46	0.94
WRAT-Arithmetic	**2.02**	**0.72**	**3.31**	0.73	-0.57	2.04
WRAT-Spelling	**1.43**	**0.21**	**2.64**	**1.30**	**0.09**	**2.51**
WRAT-Reading	1.44	-0.04	2.93	0.98	-0.56	2.51

*Wechsler Intelligence Scale for Children (WISC)

**Wide Range Achievement Test (WRAT)

***Adjusted for child birth year, sex, study site, maternal race/ethnicity, number of cigarettes smoked per day at the time of study enrollment, maternal birth year, maternal number of years of education (continuous) and parity. Models for the Bayley also adjusted for age at the time of testing.

Supplemental Table 3. Pregnancy Exposure to Fluorinated Anesthestics versus Other Anesthetics and Educational (Binary) Outcomes

	stderr	Unadjusted OR	95% Lower CL	95% Upper CL	Adjusted OR**	95% Lower CL	95% Upper CL
Educational Outcomes							
Repeated a grade		0.91	0.58	1.42	1.45	0.89	2.35
Special school/not in school		1.10	0.41	3.00	1.03*	0.36	2.97
Special education		1.83	0.89	3.76	1.37	0.62	3.05

*Generalized estimating equations effect estimates not calculable due to sparse data, so model was run without clustering

**Adjusted for child birth year, sex, study site, maternal race/ethnicity, number of cigarettes smoked per day at the time of study enrollment, maternal birth year, maternal number of years of education (continuous) and parity.