Supplemental Material

Prenatal Exposure to Perfluorocarboxylic Acids (PFCAs) and Fetal and Postnatal Growth in the Taiwan Maternal and Infant Cohort Study

Yan Wang, Margaret Adgent, Pen-Hua Su, Hsiao-Yen Chen, Pau-Chung Chen, Chao A. Hsiung, and Shu-Li Wang

Table of Contents

Table S1. Prenatal Characteristic Comparisons between Children Included in the Present Study and Not Included in the Taiwan Maternal and Infant Cohort Study

Characteristics	Children included (n=223)	Children not included (n=207)	p value[a]
Mothers			
Age at enrollment (years), Mean ± SD	29.1 ± 4.2	28.2 ± 4.3	0.06
Pre-pregnancy BMI (kg/m^2), Mean ± SD	20.8 ± 3.0	20.5 ± 3.2	0.36
Weight gain during pregnancy (kg)[b], Mean ± SD	11.6 ± 5.9	13.4 ± 5.9	0.002
PFOA (μg/mL), GM (95% CI)	2.0 (1.8, 2.2)	1.9 (1.6, 2.2)	0.6
PFNA (μg/mL), GM (95% CI)	1.4 (1.2, 1.6)	1.4 (1.1, 1. 6)	0.7
PFDeA (μg/mL), GM (95% CI)	0.4 (0.3, 0.4)	0.4 (0.3, 0.5)	0.4
PFUnDA (μg/mL), GM (95% CI)	3.0 (2.4, 3.7)	3.4 (2.7, 4.4)	0.4
PFDoDA (μg/mL), GM (95% CI)	0.3 (0.2, 0.3)	0.3 (0.3, 0.4)	0.3
Education, n(%)			
< High school	9 (5)	15 (7)	0.9
High school	83 (42)	96 (43)	
Part college	74 (37)	81 (36)	
≥ college	34 (17)	32 (14)	
Previous live birth ≥ 1, n(%)	100 (50)	82 (36)	0.005
Annual family income (US $), n(%)			
< 20, 000	80 (40)	103 (47)	0.2
≥ 20, 000	118 (60)	118 (53)	
Smoking during pregnancy, n(%)	3 (1.5)	5 (2.3)	0.61
Drinking alcohol during pregnancy, n(%)	0 (0)	2 (0.9)	
Infants			
Sex, n(%)			
Female	98 (49)	73 (48)	0.9
Male	104 (51)	79 (52)	

a. p values were obtained from student *t* tests or chi-square tests.

b. N for weight gain during pregnancy was 109 children included and 72 not included.

Table S2. Pair-wise Person Correlation Coefficients among Ln-transformed PFCAs in the Taiwan Maternal and Infant Cohort Study (n=223)

	PFOA	PFNA	PFDeA	PFUnDA	PFDoDA
PFOA	1	0.32**	0.34**	0.13	0.14*
PFNA		1	0.62**	0.81**	0.80**
PFDeA			1	0.56**	0.57**
PFUnDA				1	0.86**
PFDoDA					1

* p<0.05; **p<0.001.

Table S3. β (95% CIs) for Associations of Prenatal PFOA and Long-chain PFCAs with Birth Outcomes[a] in Female Infants in the Taiwan Maternal and Infant Cohort Study, 2000-2001

Prenatal PFCAs (ng/mL)	Birth weight[b]	Birth length[b]	Birth head circumference[b]
PFOA			
≤ 1.57 (Reference)			
> 1.57-2.34	-0.12 (-0.35, 0.12)	-0.39 (-1.80, 1.02)	0.08 (-0.81, 0.96)
> 2.34-3.43	-0.05 (-0.27, 0.18)	0.78 (-0.57, 2.13)	-0.01 (-0.85, 0.84)
> 3.43	-0.11 (-0.34, 0.12)	-0.60 (-1.98, 0.77)	0.49 (-0.38, 1.35)
PFNA			
≤ 0.84 (Reference)			
> 0.84-1.58	-0.15 (-0.38, 0.08)	-0.18 (-1.62, 1.27)	-1.25 (-2.10, -0.39)**
> 1.58-2.42	-0.25 (-0.48, -0.03)*	-0.64 (-2.04, 0.76)	-1.07 (-1.90, -0.24)*
> 2.42	-0.26 (-0.49, -0.03)*	-0.87 (-2.28, 0.55)	-0.76 (-1.59, 0.08)
PFDeA			
≤ 0.16 (Reference)			
> 0.16-0.43	0.00 (-0.22, 0.23)	0.07 (-1.33, 1.48)	0.05 (-0.83, 0.93)
> 0.43-0.64	-0.12 (-0.33, 0.10)	-0.20 (-1.56, 1.16)	-0.30 (-1.15, 0.55)
> 0.64	-0.23 (-0.44, -0.01)*	-0.75 (-2.09, 0.59)	-0.67 (-1.51, 0.16)
PFUnDA			
≤ 1.46 (Reference)			
> 1.46-3.31	-0.15 (-0.37, 0.06)	-0.94 (-2.30, 0.42)	-0.47 (-1.30, 0.37)
> 3.31-9.15	-0.19 (-0.41, 0.03)	-0.56 (-1.93, 0.81)	-0.50 (-1.35, 0.34)
> 9.15	-0.36 (-0.58, -0.14)**	-1.65 (-3.04, -0.26)*	-0.67 (-1.52, 0.19)
PFDoDA			
≤ 0.23 (Reference)			
> 0.23-0.37	-0.00 (-0.23, 0.23)	-0.37 (-1.80, 1.06)	-0.49 (-1.38, 0.40)
> 0.37-0.51	-0.19 (-0.41, 0.03)	-0.85 (-2.21, 0.51)	-0.27 (-1.12, 0.58)
> 0.51	-0.18 (-0.40, 0.05)	-1.01 (-2.40, 0.38)	-0.52 (-1.38, 0.35)

*$p<0.05$; **$p<0.01$.

a. Prenatal PFCAs by quartiles were not fit for SGA because of the small sample size of SGA.

b. Models were adjusted for family annual income, maternal age at delivery, maternal education, maternal previous live children, and maternal pre-pregnancy BMI.