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Supplemental Material

Interactions between Diet and Exposure to Secondhand Smoke on the Prevalence of Childhood Obesity: Results from NHANES, 2007–2010

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Table of Contents

Table S1. Comparison of weight categories among 6-19 year olds, 2007-2010 NHANES

Table S2. Spearman rank correlation coefficients for dietary nutrients among 6-19 year olds, 2007-2010 NHANES

Table S3. Crude and adjusted models for the association of exposure to SHS exposure and overweight and obesity^a among U.S. children, ages 6-19 years, 2007-2010 NHANES

Table S1. Comparison of weight categories among 6-19 year olds, 2007-2010 NHANES

	U.S. Definition ^a		
	Normal/underweight	Overweight	Obese
International Definition^b			
Normal/underweight	99%	1%	0%
Overweight	24%	68%	8%
Obese	0%	2%	98%

Abbreviations: NHANES, National Health and Nutrition Examination Survey

^aOverweight was defined as having a body mass index ≥ 85 th percentile and < 95 th percentile and obesity was defined as having a body mass index ≥ 95 th percentile by age and sex, based on the 2000 Centers for Disease Control and Prevention growth charts.

^bOverweight and obesity is defined as having a body mass index that corresponds to a body mass index of 25 and 30 at age 18, respectively, based on the International Obesity Task Force growth charts.

Table S2. Spearman rank correlation coefficients for dietary nutrients among 6-19 year olds, 2007-2010 NHANES

	Dietary Fiber	Vitamin C	Vitamin E	EPA	DHA
Dietary Fiber	1				
Vitamin C	0.39	1			
Vitamin E	0.65	0.36	1		
EPA	0.18	0.11	0.28	1	
DHA	0.08	0.13	0.22	0.70	1

Abbreviations: DHA, docosahexaenoic acid; EPA, eicosapentaenoic acid; NHANES, National Health and Nutrition Examination Survey

Table S3. Crude and adjusted models for the association of exposure to SHS exposure and overweight and obesity^a among U.S. children, ages 6-19 years, 2007-2010 NHANES

	NNAL Exposure		Cotinine Exposure		Self-report of Household Smokers	
	Overweight vs. Normal ORs (95% CIs)	Obese vs. Normal ORs (95% CIs)	Overweight vs. Normal ORs (95% CIs)	Obese vs. Normal ORs (95% CIs)	Overweight vs. Normal ORs (95% CIs)	Obese vs. Normal ORs (95% CIs)
Crude						
Below LOD/None	1 ^b	1	1	1	1	1
Low	1.2 (0.9, 1.6)	1.6 (1.2, 2.3)	1.2 (0.9, 1.6)	1.2 (1.0, 1.5)	1.2 (0.8, 1.9)	1.8 (1.3, 2.3)
High	1.2 (1.0, 1.6)	1.9 (1.4, 2.6)	1.1 (0.1, 1.4)	1.8 (1.4, 2.3)	0.8 (0.4, 1.3)	1.6 (1.0, 2.4)
p for trend ^c	p=0.18	p<0.01	p=0.40	p<0.01	p=0.59	p<0.01
Model 1^d						
Below LOD/None	1	1	1	1	1	1
Low	1.3 (0.9, 1.8)	1.7 (1.2, 2.5)	1.2 (0.9, 1.6)	1.3 (1.0, 1.6)	1.2 (0.7, 1.9)	1.7 (1.2, 2.4)
High	1.3 (1.0, 1.7)	2.2 (1.6, 3.1)	1.2 (0.8, 1.6)	1.9 (1.4, 2.5)	0.8 (0.5, 1.6)	1.7 (1.1, 2.8)
p for trend	p=0.08	p<0.01	p=0.29	p<0.01	p=0.84	p<0.01
Model 2^e						
Below LOD/None	1	1	1	1	1	1
Low	1.5 (1.1, 2.1)	1.8 (1.3, 2.7)	1.3 (0.9, 1.9)	1.6 (1.1, 2.0)	1.2(0.6, 2.4)	2.0 (1.4, 3.0)
High	1.4 (0.9, 2.0)	2.5 (1.7, 3.5)	1.1 (0.8, 1.6)	2.1 (1.5, 3.0)	0.8 (0.3, 1.7)	2.1 (1.3, 3.3)
p for trend	p=0.04	p<0.01	p=0.36	p<0.01	p<0.05	p=0.74
Model 2b^f						
Below LOD/None	1	1	1	1	1	1
Low	1.4 (1.0, 2.1)	2.2 (1.5, 3.2)	1.7 (1.1, 2.6)	1.7 (1.2, 2.7)	1.0 (0.5, 1.9)	1.5 (0.9, 2.5)
High	1.2 (0.8, 1.8)	2.1 (1.4, 3.2)	1.1 (0.7, 1.6)	1.9 (1.3, 2.9)	0.7 (0.3, 1.6)	1.6 (1.0, 2.7)
p for trend	p=0.18	p<0.01	p=0.33	p<0.01	p=0.30	p=0.02
Model 3^g						
Below LOD/None						
Low	1.4 (0.9, 2.1)	2.1 (1.5, 3.0)	0.9 (0.6, 1.4)	1.7 (1.1, 2.5)	0.8 (0.4, 1.7)	1.0 (1.0, 1.1)
High	1.1 (0.7, 1.6)	1.8 (1.2, 2.7)	1.6 (1.1, 2.5)	1.6 (1.1, 2.5)	0.5 (0.2, 1.4)	2.0 (1.4, 2.8)
p for trend	p=0.44	p<0.01	p=0.67	p=0.01	p=0.10	p=0.27

Abbreviations: CI, confidence intervals; LOD, limit of detection; NNAL, 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol; OR, odds ratio; SHS, secondhand smoke

^aOverweight was defined as having a body mass index ≥ 85 th percentile and < 95 th percentile and obesity was defined as having a body mass index ≥ 95 th percentile by age and sex, based on the 2000 Centers for Disease Control and Prevention growth charts.

^bReference category.

^cTests for trends were performed by treating the categorical exposure to SHS variable as a continuous variable in the logistic regression model.

^cAdjusted for sex, age, race/ethnicity and poverty index ratio.

^dModel 1 plus additional adjustment for the total caloric intake and physical activity levels.

^eModel 1 plus adjustment for the total caloric intake and physical activity levels among children with information about maternal smoking during pregnancy (n=2,106).

^fModel 2 plus additional adjustment for report of maternal smoking during pregnancy (n=2,106).