

Table S1. **Demographics plus BMI model.** Change in ln(urinary PAH biomarkers) ( $\beta$ ) adjusted for age, race, income, BMI percentile<sup>1</sup>, and ln(creatinine).

	1-naphthol		2-naphthol		$\Sigma$ fluorene		$\Sigma$ phenanthrene		1-hydroxypyrene	
	e <sup><math>\beta</math></sup>	95% CI	e <sup><math>\beta</math></sup>	95% CI	e <sup><math>\beta</math></sup>	95% CI	e <sup><math>\beta</math></sup>	95% CI	e <sup><math>\beta</math></sup>	95% CI
Age (years)										
6.0-6.9	0.91	(0.68-1.21)	1.06	(0.88-1.27)	1.19	(1.07-1.33)	1.13	(1.01-1.27)	1.11	(0.96-1.27)
$\geq 7.0$	1	-	1	-	1	-	1	-	1	-
Race										
Black	0.76	(0.54-1.07)	1.11	(0.89-1.38)	0.98	(0.86-1.12)	0.91	(0.79-1.04)	1.09	(0.93-1.28)
Hispanic	1.79	(0.57-1.11)	1.65	(1.33-2.05)	0.98	(0.86-1.12)	0.99	(0.86-1.13)	1.07	(0.91-1.26)
Asian	0.84	(0.56-1.25)	1.33	(1.03-1.72)	1.02	(0.87-1.19)	1.14	(0.97-1.34)	1.24	(1.02-1.50)
White	1	-	1	-	1	-	1	-	1	-
Household income (dollars)										
<50,000	1.04	(0.72-1.48)	1.38	(1.09-1.74)	1.10	(0.95-1.26)	1.01	(0.87-1.16)	1.07	(0.90-1.27)
50,000 – 100,000	0.90	(1.68-1.19)	1.11	(0.93-1.33)	0.98	(0.88-1.09)	0.94	(0.84-1.06)	0.96	(0.84-1.10)
$\geq 100,000$	1	-	1	-	1	-	1	-	1	-
BMI percentile <sup>2</sup>										
<50 <sup>th</sup>	1	-	1	-	1	-	1	-	1	-
50-84 <sup>th</sup>	0.89	(0.66-1.19)	0.90	(0.75-1.08)	0.96	(0.86-1.08)	0.94	(0.84-1.06)	0.94	(0.82-1.08)
$\geq 85^{\text{th}}$	0.97	(0.71-1.33)	1.11	(0.90-1.35)	1.08	(0.96-1.22)	1.07	(0.94-1.22)	1.01	(0.87-1.18)
ln(creatinine), continuous	2.25	(1.85-2.74)	2.82	(2.48-3.20)	2.49	(2.30-2.69)	2.53	(2.33-2.74)	2.34	(2.12-2.58)

<sup>1</sup>No relationship between BMI and PAHs levels, BMI was removed from multivariable models with exposures

<sup>2</sup>Age- and sex-specific BMI percentile based on 2000 growth charts from CDC

Abbreviations: CI confidence interval

Table S2. Spearman correlations of urinary PAH biomarkers.

	2-naphthol	2-hydroxyfluorene	3-hydroxyfluorene	9-hydroxyfluorene	1-hydroxyphenanthrene	2-hydroxyphenanthrene	3-hydroxyphenanthrene	4-hydroxyphenanthrene	1-hydroxypyrene <sup>1</sup>
1-naphthol	0.34 <.0001	0.38 <.0001	0.4 <.0001	0.44 <.0001	0.45 <.0001	0.39 <.0001	0.41 <.0001	0.37 <.0001	0.33 <.0001
1-hydroxypyrene <sup>1</sup>	0.43 <.0001	0.75 <.0001	0.68 <.0001	0.67 <.0001	0.78 <.0001	0.77 <.0001	0.8 <.0001	0.53 <.0001	
4-hydroxyphenanthrene	0.28 <.0001	0.56 <.0001	0.52 <.0001	0.61 <.0001	0.64 <.0001	0.62 <.0001	0.61 <.0001		
3-hydroxyphenanthrene	0.47 <.0001	0.82 <.0001	0.79 <.0001	0.8 <.0001	0.86 <.0001	0.88 <.0001			
2-hydroxyphenanthrene	0.49 <.0001	0.83 <.0001	0.75 <.0001	0.77 <.0001	0.84 <.0001				
1-hydroxyphenanthrene	0.44 <.0001	0.82 <.0001	0.74 <.0001	0.79 <.0001					
9-hydroxyfluorene	0.46 <.0001	0.74 <.0001	0.66 <.0001						
3-hydroxyfluorene	0.5 <.0001	0.89 <.0001							
2-hydroxyfluorene	0.54 <.0001								

<sup>1</sup>The total number of samples for this analyte is 429.

Table S3. Characteristics BCERP CA site at baseline by 1-naphthol:2-naphthol ratio.

	Ratio at or below 2		Ratio above 2		p-value
	N	%	N	%	
Age (years)					0.77
6.0-6.9	78	24	24	23	
7.0-7.9	241	74	81	76	
≥8.0	6	2	1	1	
Child race/ethnicity					0.02
Black	75	23	21	20	
Hispanic	89	27	17	16	
Asian	41	13	11	10	
White	120	37	57	54	
BMI percentile <sup>1</sup>					0.67
<50 <sup>th</sup>	106	33	38	36	
50 <sup>th</sup> – 85 <sup>th</sup>	119	37	40	37	
>85 <sup>th</sup>	100	31	28	26	
Parent or guardian education					<.001
High school or less	74	23	8	8	
Some college	108	33	24	23	
Bachelor's degree or greater	142	44	73	70	
Household income (dollars)					0.12
<50,000	73	23	18	17	
50,000 – 100,000	121	38	34	32	
≥100,000	125	39	53	50	
Cotinine (µg/L)	GM (95%CI)		GM (95% CI)		0.19
	0.27 (0.23-0.31)		0.22 (0.17-0.29)		
Grilled food in last 2 days					0.52
Yes	68	21	19	18	
No	256	79	86	82	
Distance weighted traffic density (highest AADT in 150 m buffer)					0.75
Local traffic	94	29	27	26	
<1813.47	60	18	18	17	
1813.47-4536.87	60	18	17	16	
4536.88-9727.07	54	17	23	22	
≥9727.08	57	18	20	19	
Season of urine collection					<.001
Spring (March-May)	86	27	31	29	
Summer (June-August)	143	44	23	22	
Fall (September-November)	48	15	35	33	

Winter (December-February)	48	15	17	16	
Region of residence at baseline					0.17
Marin County	76	23	18	17	
San Francisco	57	18	26	25	
East Bay	192	59	62	58	

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<sup>1</sup>Age- and sex-specific BMI percentile based on 2000 growth charts from CDC