

Supporting Information

Title: Exposure of preschool-age Greek children (RHEA cohort) to bisphenol-A, parabens, phthalates and organophosphates

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Table S1. Comparison of baseline socio-demographic factors between participants and non-participants in the present analysis.

	Participants (N=500)		Non participants (N=863)		
	n	%	n	%	p-value
Maternal age (y)					0.994
<= 20	22	4.6%	38	4.7%	
21 - 30	258	54.2%	430	53.5%	
31 - 40	189	39.7%	324	40.3%	
41+	7	1.5%	11	1.4%	
Paternal age (y)					0.480
<= 25	23	5.0%	55	7.1%	
26 - 35	283	61.0%	453	58.8%	
36 - 45	147	31.7%	243	31.5%	
46+	11	2.4%	20	2.6%	
Maternal education					0.033
Low	83	17.7%	186	23.8%	
Medium	246	52.3%	385	49.4%	
High	141	30.0%	209	26.8%	
Paternal education					0.581
Low	170	36.7%	299	38.4%	

Table S2. Comparison of EDs metabolite levels with similar studies, creatinine adjusted median (µg/g) values

Country; number of samples; age (y); reference	mEP	miBP	mnBP	mEHHP	mEOHP	mBzP	mEHP	MPB	EPB	isoPPB	nPPB	isoBPB	nBPB	BPA
Present study; Greece; n=500	53.5	48.8	27.9	40.7	35.4	7.0	10.6	17.6	1.5	<mLOD	1.5	<mLOD	<mLOD	1.9
Previous RHEA study, 2.5-year children; Greece; n=239; ¹	86.6	101.6	62.3	71.0	51.0	17.0	9.1	42.6	3.7	<LOD	2.3	<LOD	<LOD	5.2
Denmark; n=845; 4-9 y; ²	33.5	-	209.0	52.0	27.0	23.0	6.8	-	-	-	-	-	-	-
USA; n=379; 7.3 y; ³	164.9	22.5	68.4	73.9	47.6	41.8	6.4	-	-	-	-	-	-	-
Germany; n=465; 8-10 y; ⁴	21.4	41.1	42.3	20.2	13.5	6.0	2.23	-	-	-	-	-	-	1.8
Denmark; n=143; 6-11 y; ⁵	-	-	-	-	-	-	-	0.9	0.26	<LOD	<LOD	<LOD	<LOD	-
USA; n=292; 5 y; ⁶	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2
China; n=1089; 9 y; ⁷	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3
China; n=666; 9-12 y; ⁸	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2
USA; n=229; 1-3 y; ⁹	-	-	-	-	-	-	-	-	-	-	-	-	-	14.0

Table derived from our previous study¹

Table S3. Estimated daily intake of PEs, PBs, BPA and total OPs ($\mu\text{g d}^{-1} \text{kg}^{-1}$)

	Arithmetic mean	Geometric mean	Geometric mean 95% CI	Minimum	Median	95% percentile	Maximum
DEP	4.89	1.41	1.27-1.57	0.04	1.30	10.89	726.23
DiBP	1.76	1.01	0.90-1.13	<mLOD	1.20	5.31	23.84
DnBP	1.33	0.53	0.46-0.62	<mLOD	0.70	4.25	22.94
BBP	0.38	0.17	0.15-0.19	<mLOD	0.17	1.32	15.95
DEHP	6.48	3.83	3.50-4.18	0.06	4.02	17.30	206.92
MPB	178.34	33.88	29.78-38.54	1.52	25.75	589.88	8616.56
EPB	17.15	2.52	2.18-2.91	<mLOD	2.01	57.23	706.04
isoPPB	0.32	NC	NC	<mLOD	<mLOD	<mLOD	33.50
nPPB	22.41	2.55	2.16-3.00	<mLOD	1.93	76.74	1082.29
isoBPB	0.54	NC	NC	<mLOD	<mLOD	0.31	112.85
nBPB	1.43	NC	NC	<mLOD	<mLOD	1.48	217.56
BPA	0.045	0.024	0.021	<mLOD	0.026	0.143	1.327
Total OPs	1.04	0.51	0.47-0.57	0.02	0.51	3.29	28.15

NC: not calculated / Total OPs are expressed in Chloropyrifos equivalents

Table S4. Two-tailed Spearman's correlation coefficients, p-values <0.01

	DEP	DMTP	mEP	miBP	mnBP	mBzP	mEHHP+ mEOHP	MPB	EPB	nPPB	BPA
Age(y)											-0.143
DET P	0.489	0.607	0.285	0.343	0.304	0.346	0.348	0.242	0.218	0.198	0.212
DEP		0.421	0.181	0.182	0.148	0.191	0.169	0.143		0.116	0.129
DMTP			0.352	0.353	0.327	0.381	0.414	0.253	0.171	0.183	0.218
mEP				0.589	0.502	0.511	0.643	0.572	0.487	0.517	0.453
miBP					0.751	0.737	0.706	0.512	0.471	0.510	0.575
mnBP						0.797	0.731	0.476	0.445	0.478	0.662
mBzP							0.740	0.464	0.435	0.479	0.566
mEHHP+ mEOHP								0.550	0.513	0.528	0.588
MPB									0.693	0.732	0.403
EPB										0.645	0.457
nPPB											0.423

Table S5. PCA: rotated component matrix and total variance explained

Component	1	2	3
Eigenvalue	5.734	1.890	1.198
% of Variance	44.1	14.5	9.2
Cumulative %	44.1	58.6	67.9
mnBP	0.856	0.181	0.108
mBzP	0.820	0.195	0.208
mEHHP+mEOHP	0.768	0.381	0.210
BPA	0.754	0.188	-0.011
miBP	0.726	0.304	0.183
mEP	0.522	0.510	0.211
MPB	0.225	0.883	0.121
nPPB	0.284	0.841	0.035
EPB	0.284	0.819	0.042
DMTP	0.260	0.070	0.793
DETP	0.222	0.115	0.746
DMDTP	0.065	0.029	0.713
DEP	-0.019	0.052	0.673

Rotation converged in 5 iterations.

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