

Supplementary material

Table S1. Characteristics of study participants.

Determinants	Modalities	Mother-child pairs (N=259) N (%) or mean (SD)	Mothers population (N=388) N (%) or mean (SD)
Sex of child^b	Boy Girl NA (%)	106 (40.9) 153 (59.1) 3 (1.1)	208 (53.61) 180 (46.39) 0
Mother's age^{a,b}	25-30 31-35 36-40 >40 NA (%)	48 (18.5) 100 (38.6) 78 (30.1) 33 (12.7) 2 (0.8)	169 (43.56) 135 (34.79) 69 (17.78) 15 (3.87) 0
Mother's BMI^b	18.5 - < 25 <18.5 25 - < 30 30 or more NA (%)	183 (70.7) 18 (6.9) 39 (15.1) 19 (7.3) 2 (0.8)	268 (69.07) 32 (8.25) 57 (14.69) 31 (7.99) 4 (1)
Mother's education level^{a,b}	<= BAC BAC +2 > BAC NA (%)	61 (23.6) 60 (23.1) 138 (53.3) 2 (0.8)	103 (26.55) 102 (26.29) 183 (47.16) 3 (0.8)
Father's education level^{a,b}	<= BAC BAC +2 > BAC+2 NA (%)	110 (42.5) 54 (20.8) 95 (36.7) 8 (3.1)	169 (43.56) 79 (20.36) 140 (36.08) 19 (5)
household income (euros)^{a,b}	<=2999 [3000 ; 3999] >= 4000 NA (%)	59 (22.8) 71 (27.4) 129 (49.8) 12 (4.5)	130 (33.51) 121 (31.19) 137 (35.31) 21 (5.5)
Smoking status during pregnancy^b	Not a smoker Smoker NA (%)	209 (80.7) 51 (19.3) 2 (0.8)	319 (82.22) 69 (17.78) 3 (0.8)
Alcohol consumption during pregnancy^b	No Yes NA (%)	189 (72.9) 70 (27.1) 2 (0.8)	292 (75.26) 96 (24.74) 1 (0.3)
Renovation work^{a,b}	No Yes NA (%)	178 (68.7) 81 (31.3) 2 (0.8)	172 (44.33) 216 (55.67) 4 (1)
Construction year of house^{a,b}	> 2000 [1970-2000] <1970 NA (%)	99 (38.2) 69 (26.7) 91 (35.1) 52 (19.9)	3 (0.8) 5 (1.3) 2 (0.1) 373 (97.8)
Type of floor in the child's room^a	Tiles Lino Carpet Parquet NA (%)	24 (9.3) 40 (15.4) 14 (5.4) 181 (69.9) 21 (8)	x
BDE_47 (ng/g)^{a,b}	<= 0.43] 0.43 ; 1.23] >1.23 NA (%)	87 (33.2) 88 (33.6) 87 (33.2) 0	71 (18.30) 76 (19.59) 241 (62.11) 0
BDE_209 (ng/g)^{a,b}	<= 5.4] 5.4 ; 11.8] >11.8 NA (%)	x	134 (34.54) 124 (31.96) 130 (33.51) 0
Duration of breastfeeding (months)^a	<= 1] 1 ; 4]	96 (37) 80 (30.9)	x

	>4 NA (%)	83 (32.1) 2 (0.08)	
Time spent outdoors by children (hours/week) ^a	<= 4.5] 4.5 ; 7] >7 NA (%)	89 (33.9) 100 (38.3) 73 (27.8) 0	x
Time using electronic devices (hours/week) by children ^a	<= 2] 2 ; 4] >4 NA (%)	97 (37) 80 (30.5) 85 (32.5) 0	x
Number of windows in the child's room^a	1 2 NA (%)	220 (84.9) 39 (15.1) 2 (0.8)	x
Ventilation in the child's room^a	Yes No NA(%)	74 (28.6) 185 (71.4) 2 (0.8)	x
Season when hair was collected ^{ab}	Summer Autumn Winter Spring NA (%)	0 86 (33.2) 173 (66.8) 0 5 (1.9)	122 (31.44) 266 (68.56) 0 0 13 (3.4)
Number of people in the household^{ab}	<= 3 people 4 people >5 people NA (%)	63 (24.3) 126 (48.6) 70 (27.1) 2 (0.08)	172 (44.33) 145 (37.37) 71 (18.30) 13 (3.4)

N: number; SD: standard deviation; NA: missing data; ^a variables present in the 3.5-year questionnaire;

^b variables present in the maternity questionnaire or in the two-month questionnaire; x: data not collected in the maternity survey or in the two-month survey; the percentages of the modalities exclude NA.

Table S2. OPFR concentrations (ng/g) in mothers at birth (n=388) in 2011 and in children aged 3.5 years old (n=259) in 2014-2015.

OPFR	CAS number	Populations	Min	P25	P50	P75	P95	Max	Geometric mean (SD)
EHDPP	1241-94-7	Children	11	41	83	214	401	4423	97 (3)
		Mothers	1	22	35	56	101	51204	37 (3)
TBEP	78-51-3	Children	1	20	59	138	286	2082	53 (4)
		Mothers	31	34	35	50	137	2034	48 (2)
TBP	126-73-8	Children	5	15	19	27	34	89	20 (2)
		Mothers	10	27	35	45	54	84	34 (2)
TCEP	115-96-8	Children	1	9	14	24	47	623	14 (3)
		Mothers	1	6	12	23	52	939	13 (3)
TCPP	13674-84-5	Children	37	159	259	421	739	11848	269 (3)
		Mothers	14	189	256	374	669	3155	270 (2)
TDCPP	13674-87-8	Children	3	41	89	184	485	2343	94 (3)
		Mothers	2	25	49	109	252	16689	57 (4)
TEP	78-40-0	Children	2	9	13	18	29	153	13 (2)
		Mothers	4	23	49	76	97	238	42 (2)
TMCP	563-04-2	Children	1	1	3	8	20	1229	3 (5)
		Mothers	1	5	10	25	70	18194	12 (5)
TPP	115-86-6	Children	8	44	77	143	254	1874	82 (3)
		Mothers	5	37	63	106	298	8621	66 (3)

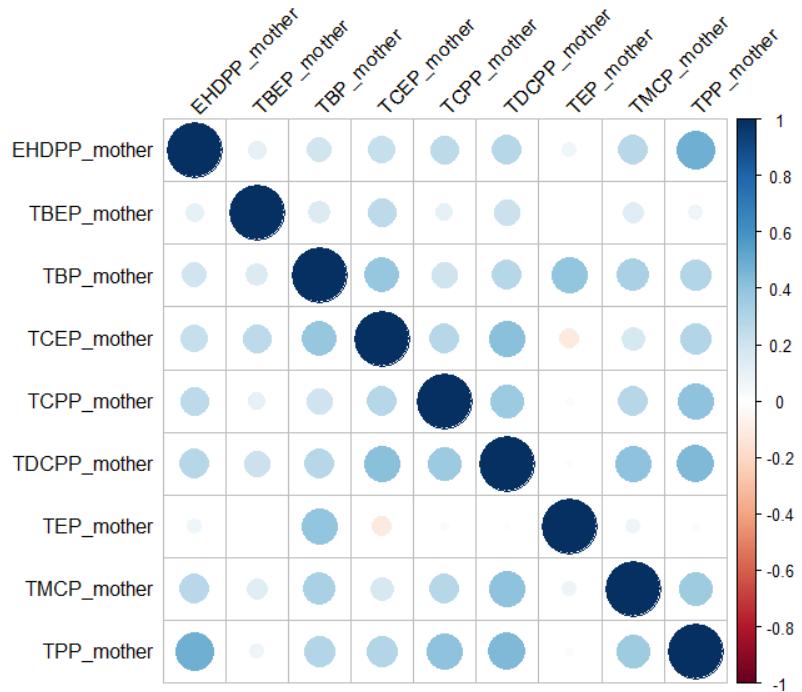


Fig S1. Weighted correlation matrix of OPFR concentrations among mothers (pre-natal exposures) in France (2011).

Associated p-values (fig S1)

	EHDPP_mother	TBEP_mother	TBP_mother	TCEP_mother	TCPP_mother	TDCPP_mother	TEP_mother	TMCP_mother	TPP_mother
EHDPP_mother	0.000000e+00	4.121104e-02	1.113760e-04	4.537312e-06	1.246941e-07	6.804621e-09	1.985643e-01	4.140708e-08	9.030634e-24
TBEP_mother	4.121104e-02	0.000000e+00	2.272421e-03	7.983381e-08	4.227894e-02	2.068323e-05	8.469163e-01	8.021370e-03	1.681794e-01
TBP_mother	1.113760e-04	2.272421e-03	0.000000e+00	1.624587e-15	3.687309e-05	1.889674e-08	2.660023e-16	9.943822e-11	2.869226e-09
TCEP_mother	4.537312e-06	7.983381e-08	1.624587e-15	0.000000e+00	1.123322e-08	1.019197e-17	1.975287e-02	3.899080e-04	2.547886e-09
TCPP_mother	1.246941e-07	4.227894e-02	3.687309e-05	1.123322e-08	0.000000e+00	2.063587e-13	6.073282e-01	6.064368e-09	9.669294e-17
TDCPP_mother	6.804621e-09	2.068323e-05	1.889674e-08	1.019197e-17	2.063587e-13	0.000000e+00	7.426285e-01	2.354499e-16	5.034561e-20
TEP_mother	1.985643e-01	8.469163e-01	2.660023e-16	1.975287e-02	6.073282e-01	7.426285e-01	0.000000e+00	1.623922e-01	6.213637e-01
TMCP_mother	4.140708e-08	8.021370e-03	9.943822e-11	3.899080e-04	6.064368e-09	2.354499e-16	1.623922e-01	0.000000e+00	4.342353e-13
TPP_mother	9.030634e-24	1.681794e-01	2.869226e-09	2.547886e-09	9.669294e-17	5.034561e-20	6.213637e-01	4.342353e-13	0.000000e+00

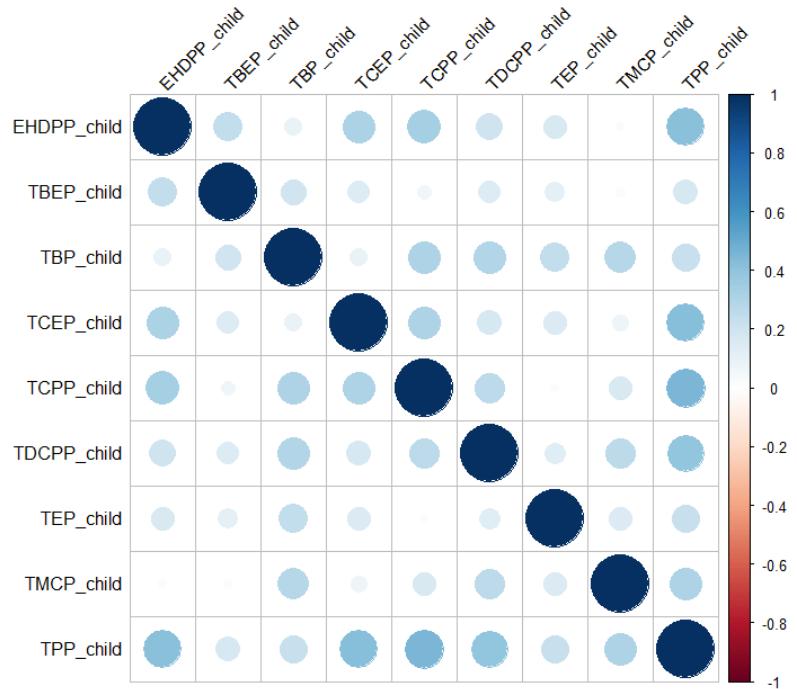


Fig S2. Weighted correlation matrix of OPFR concentrations among children (post-natal exposures) in France (2014-2015).

Associate p-values (fig S2)

	EHDPP_child	TBEP_child	TBP_child	TCEP_child	TCPP_child	TDCPP_child	TEP_child	TMCP_child	TPP_child
EHDPP_child	0.000000e+00	8.433249e-05	1.273648e-01	2.091489e-07	3.347701e-08	6.816099e-04	7.330937e-03	7.206524e-01	1.738184e-12
TBEP_child	8.433249e-05	0.000000e+00	1.933715e-03	2.153778e-02	2.977634e-01	1.689932e-02	5.942328e-02	6.588313e-01	4.911019e-03
TBP_child	1.273648e-01	1.933715e-03	0.000000e+00	1.282066e-01	4.005990e-07	9.003359e-07	8.352188e-05	2.540133e-06	2.640320e-04
TCEP_child	2.091489e-07	2.153778e-02	1.282066e-01	0.000000e+00	7.229113e-07	5.641546e-03	1.062510e-02	2.034261e-01	1.400405e-12
TCPP_child	3.347701e-08	2.977634e-01	4.005990e-07	7.229113e-07	0.000000e+00	1.097558e-05	6.840416e-01	9.102207e-03	2.148113e-14
TDCPP_child	6.816099e-04	1.689932e-02	9.003359e-07	5.641546e-03	1.097558e-05	0.000000e+00	2.793843e-02	1.961513e-05	3.532309e-11
TEP_child	7.330937e-03	5.942328e-02	8.352188e-05	1.062510e-02	6.840416e-01	2.793843e-02	0.000000e+00	1.034887e-02	1.939493e-04
TMCP_child	7.206524e-01	6.588313e-01	2.540133e-06	2.034261e-01	9.102207e-03	1.961513e-05	1.034887e-02	0.000000e+00	8.333390e-07
TPP_child	1.738184e-12	4.911019e-03	2.640320e-04	1.400405e-12	2.148113e-14	3.532309e-11	1.939493e-04	8.333390e-07	0.000000e+00

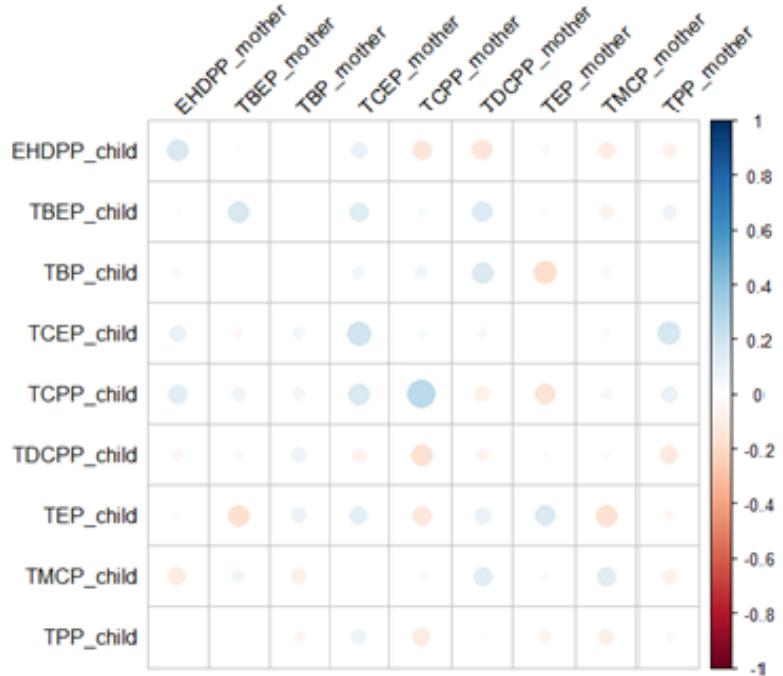


Fig S3. Weighted correlation matrix of OPFR concentrations among mother-child pairs in France.

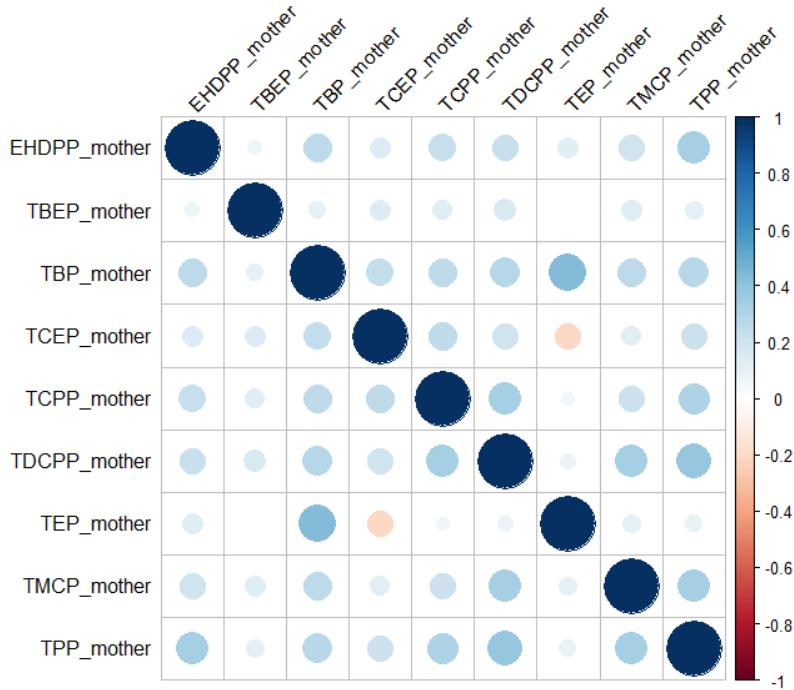


Fig S4. Unweighted correlation matrix of OPFR concentrations among mothers ($n=388$) in France (2011).



Fig S5. Unweighted correlation matrix of OPFR concentrations among children (n=259) in France (2014-2015).

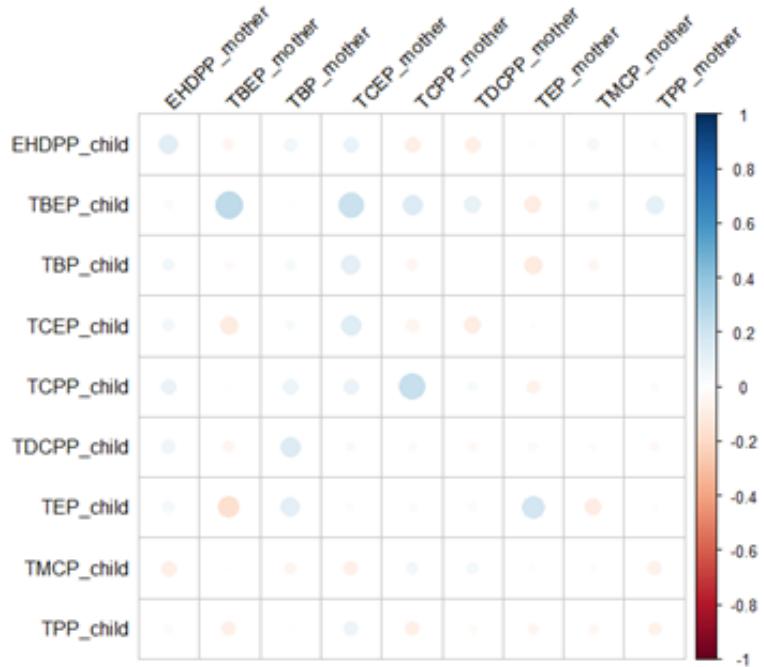
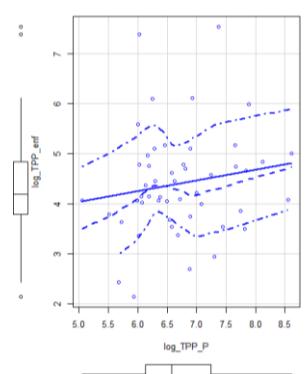
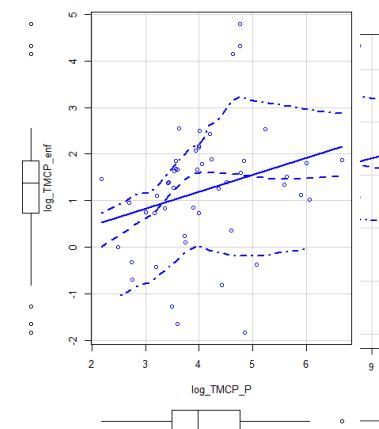
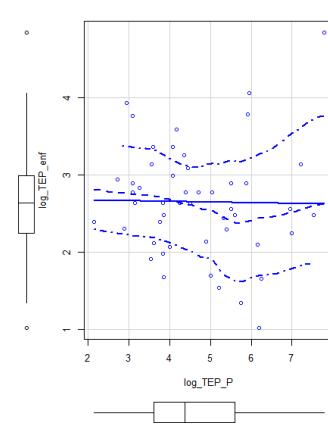
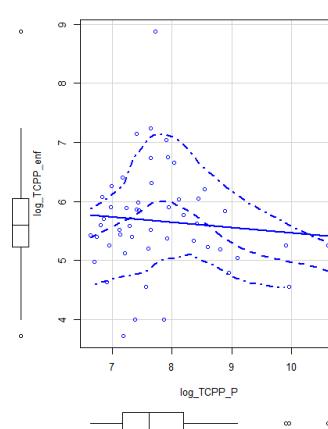
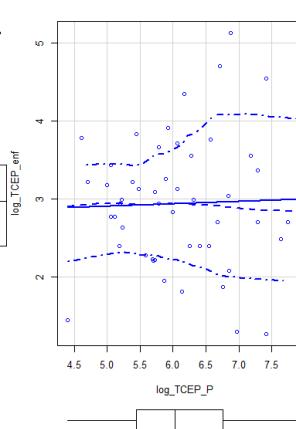
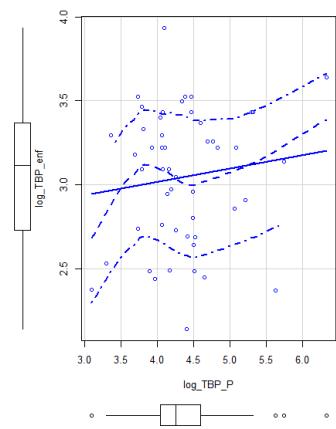
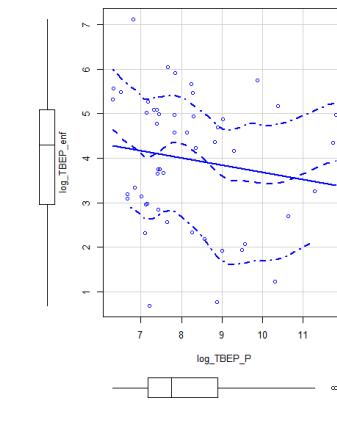
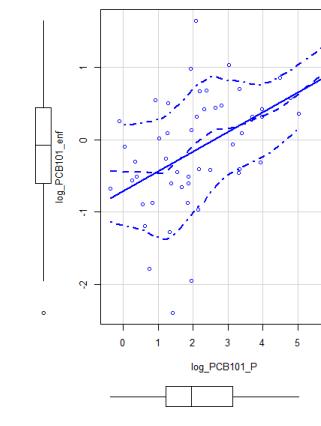
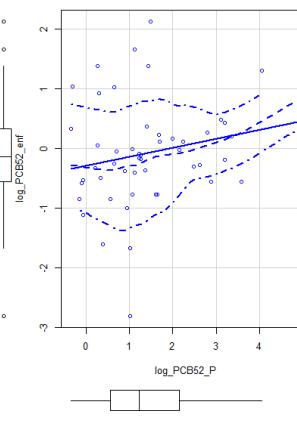
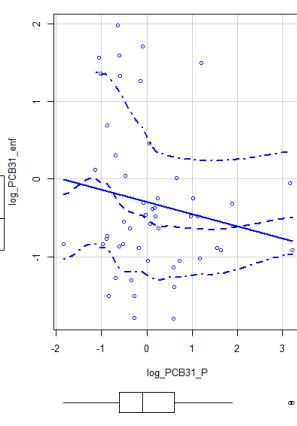
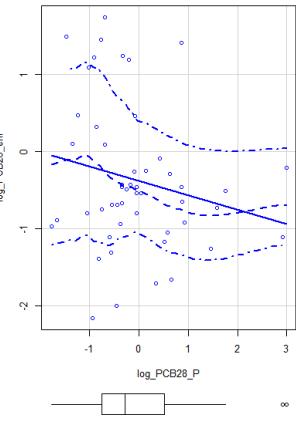
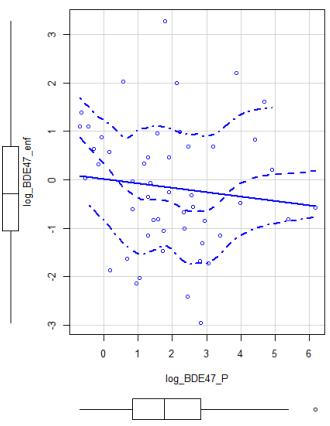


Fig S6. Unweighted correlation matrix of OPFR concentrations among mother-child pairs in France (n=259).



Rho=0.16 (p.value=0.93)

Fig S7. Correlation between OPFR concentration in children and OPFR concentration measured in dust for each substance with detection rate > 20 %.

Table S3. Association between OPFR concentrations and potential determinants among mothers at birth in France (2011).

OPFR determinants	EHDPP		TBEP		TBP		TCEP		TCPP		TDCPP	
	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P
Sources												
Home renovation work before birth												
No	Ref		Ref		Ref		Ref		Ref		Ref	
Yes	0.08 [0.09 ; 0.26]	0.35	0.07 [-0.08 ; 0.21]	0.35	0.08 [0.00 ; 0.16]	0.04	0.37 [0.13 ; 0.13]	<0.01	0.15 [0.01 ; 0.29]	0.03	0.53 [0.26 ; 0.79]	<0.01
Mothers' BDE 47 concentration at birth (ng/g)												
<= 0.43	Ref		Ref		Ref		Ref		Ref		Ref	
] 0.43 ; 1.23]	0.01 [-0.31 ; 0.34]	0.93	0.12 [-0.14 ; 0.38]	0.38	0.17 [0.03 ; 0.30]	0.01	0.03 [-0.40 ; 0.47]	0.87	0.04 [-0.21 ; 0.29]	0.74	0.04 [-0.44 ; 0.53]	0.87
>1.23	0.23 [-0.02 ; 0.48]	0.07	0.11 [-0.09 ; 0.31]	0.29	0.18 [0.08 ; 0.29]	<0.01	0.42 [0.09 ; 0.76]	0.01	0.43 [0.24 ; 0.62]	<0.01	0.16 [-0.21 ; 0.54]	0.39
Mothers' BDE 209 concentration at birth (ng/g)												
<= 5.4	Ref		Ref		Ref		Ref		Ref		Ref	
] 5.4 ; 11.8]	0.02 [-0.20 ; 0.24]	0.85	0.08 [-0.09 ; 0.26]	0.35	0.03 [-0.06 ; 0.12]	0.50	0.17 [-0.14 ; 0.47]	0.29	0.05 [-0.13 ; 0.22]	0.60	0.72 [0.42 ; 1.02]	<0.01
>11.8	0.39 [0.18 ; 0.60]	<0.01	0.31 [0.14 ; 0.48]	<0.01	0.10 [0.01 ; 0.19]	0.03	0.38 [0.08 ; 0.67]	0.01	0.15 [-0.02 ; 0.32]	0.09	1.49 [1.21 ; 1.78]	<0.01
Socio-demographic												
Mother's level of education at birth												
<= BAC	Ref		Ref		Ref		Ref		Ref		Ref	
BAC +2	-0.28 [-0.52 ; -0.03]	0.02	0.03 [-0.17 ; 0.23]	0.75	-0.08 [-0.19 ; 0.02]	0.11	-0.19 [-0.52 ; 0.15]	0.27	0.19 [-0.00 ; 0.38]	0.054	0.01 [-0.35 ; 0.38]	0.92
> BAC +2	-0.27 [-0.47 ; -0.07]	<0.01	0.11 [-0.05 ; 0.28]	0.16	-0.04 [-0.13 ; 0.05]	0.38	-0.15 [-0.42 ; 0.12]	0.28	0.19 [0.03 ; 0.35]	0.02	-0.13 [-0.43 ; 0.17]	0.39
Household income at birth (euros)												
<=2999	Ref		Ref		Ref		Ref		Ref		Ref	
[3000 ; 3999]	-0.05 [-0.27 ; 0.17]	0.67	0.02 [-0.16 ; 0.20]	0.84	-0.04 [-0.13 ; 0.06]	0.46	-0.35 [-0.65 ; -0.05]	0.02	0.03 [-0.15 ; 0.21]	0.74	-0.08 [-0.42 ; 0.26]	0.64
> 4000	-0.40 [-0.60 ; -0.17]	0.01	0.11 [0.06 ; 0.29]	0.21	-0.06 [-0.15 ; 0.03]	0.22	0.11 [-0.19 ; 0.40]	0.48	-0.04 [-0.22 ; 0.13]	0.62	0.02 [-0.31 ; 0.35]	0.92
Number of people in the household at birth												
<=3 persons	Ref		Ref		Ref		Ref		Ref		Ref	
4 persons	0.22 [0.02 ; 0.42]	0.03	0.14 [-0.02 ; 0.30]	0.08	-0.06 [-0.14 ; 0.02]	0.16	-0.05 [-0.32 ; 0.22]	0.72	-0.13 [-0.29 ; 0.03]	0.10	-0.20 [-0.40 ; 0.20]	0.53
>5 persons	0.27 [0.03 ; 0.52]	0.03	0.20 [0.001 ; 0.40]	0.048	-0.19 [-0.29 ; -0.08]	<0.01	-0.32 [-0.66 ; -0.01]	0.06	-0.09 [-0.29 ; 0.10]	0.37	0.07 [-0.30 ; 0.45]	0.70

Table S3. Association between OPFR concentrations and potential determinants among mothers at birth in France (2011).

Pre-pregnancy BMI												
18.5 - < 25	Ref											
<18.5	-0.40 [-0.72 ; -0.09]	0.01	Ref	0.00 [-0.25 ; 0.27]	0.95	Ref	0.12 [-0.01 ; 0.25]	0.07	Ref	-0.72 [-1.14 ; -0.29]	<0.01	Ref
25 - < 30	-0.13 [-0.40 ; 0.14]	0.36	-0.19 [-0.41 ; 0.03]	0.10	0.09 [-0.02 ; 0.21]	0.09	-0.22 [-0.59 ; 0.14]	0.23	-0.36 [-0.61 ; -0.11]	<0.01	0.04	Ref
30 or more	0.29 [0.04 ; 0.53]	0.02	0.16 [-0.04 ; 0.37]	0.10	0.30 [0.20 ; 0.40]	<0.01	0.53 [0.20 ; 0.86]	<0.01	-0.22 [-0.44 ; -0.01]	0.04	0.62 [0.26 ; 0.98]	<0.01
Environmental												
Season of mothers' hair sampling												
Autumn	Ref											
Summer	0.41 [0.22 ; 0.60]	<0.01	Ref	0.21 [0.05. ; 0.40]	<0.01	Ref	0.02 [-0.06 ; 0.10]	0.56	Ref	0.25 [-0.01 ; 0.51]	0.06	Ref
											0.99	Ref
											- 0.31 [-0.60 ; -0.02]	0.04
OPFR determinants												
TEP				TMCP				TPP				
				β [IC95%]	P	β [IC95%]	P	β [IC95%]	P			
Sources												
Home renovation work before birth												
No				Ref				Ref				
Yes				0.02 [-0.14 ; 0.19]	0.80			0.43 [0.09 ; 0.77]	0.01	Ref	0.43 [0.22 ; 0.65]	<0.01
Mothers' BDE 47 concentration at birth (ng/g)												
<= 0.43				Ref				Ref				
] 0.43 ; 1.23]				0.03 [-0.30 ; 0.32]	0.85			0.99 [0.39 ; 1.59]	<0.01	Ref	-0.10 [-0.50 ; 0.29]	0.60
>1.23				0.30 [0.04 ; 0.50]	0.02			1.26 [0.80 ; 1.72]	<0.01	Ref	0.32 [-0.02 ; 0.63]	0.04
Mothers' BDE 209 concentration at birth (ng/g)												
<= 5.4				Ref				Ref				
] 5.4 ; 11.8]				-0.14 [-0.35 ; 0.06]	0.16			0.86 [0.45 ; 1.27]	<0.01	Ref	0.27 [0.00 ; 0.53]	0.04
>11.8				0.10 [-0.09 ; 0.30]	0.30			1.11 [0.72 ; 1.51]	<0.01	Ref	0.66 [0.41 ; 0.92]	<0.01
Socio-demographic												
Mother's level of education at birth												
<= BAC				Ref				Ref				
BAC +2				0.03 [-0.19 ; 0.26]	0.77			0.31 [-0.15 ; 0.78]	0.19	Ref	-0.16 [-0.46 ; 0.15]	0.32
> BAC + 2				0.08 [-0.10 ; 0.26]	0.39			0.24 [-0.63 ; 0.14]	0.21	Ref	-0.04 [-0.29 ; 0.21]	0.77
Household income at birth (euros)												
<=2999				Ref				Ref				
[3000 ; 3999]				-0.17 [-0.37 ; 0.04]	0.11			0.00 [-0.42 ; 0.43]	0.97	Ref	-0.11 [-0.42 ; 0.18]	0.44
> 4000				-0.36 [-0.56 ; -0.16]	<0.01			-0.64 [-1.05 ; -0.22]	<0.01	Ref	-0.00 [-0.25 ; -0.24]	0.96
Number of people in the household at birth												
<=3 persons				Ref				Ref				
4 persons				-0.06 [-0.24 ; 0.12]	0.63			0.16 [-0.22 ; 0.54]	0.41	Ref	-0.04 [-0.28 ; 0.20]	0.75
>5 persons				-0.08-10 ⁻⁵ [-0.23 ; 0.23]	0.86			-0.13 [-0.61 ; 0.34]	0.58	Ref	-0.29 [-0.59 ; 0.02]	0.06
Pre-pregnancy BMI												
18.5 - < 25				Ref				Ref				
<18.5				0.43 [-0.14 ; -0.72]	<0.01			-0.10 [-0.71 ; 0.50]	0.73	Ref	-0.39 [0.77 ; -0.01]	0.04
25 - < 30				0.22 [-0.03 ; 0.48]	0.08			-0.04 [-0.56 ; 0.48]	0.87	Ref	-0.35 [-0.68 ; -0.02]	0.04

Table S3. Association between OPFR concentrations and potential determinants among mothers at birth in France (2011).

30 or more	0.24 [0.01 ; 0.47]	0.04	0.88 [0.41 ; 1.35]	<0.01	0.57 [0.28 ; 0.87]	<0.01
Environmental						
Season of mothers' hair sampling						
Autumn	Ref		Ref		Ref	
Summer	-0.19 [-0.36 ; 0.01]	0.04	-0.44 [-0.80 ; -0.07]	0.02	0.07 [-0.16 ; 0.31]	0.55

Table S4. Association between OPFR concentrations and potential determinants among children in France (2014-2015).

OPFR determinants	EHDPP		TBEP		TBP		TCEP		TCPP		
	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P	
Sources											
Home renovation work at 3.5 years of child during the year before the survey	No Yes	Ref 0.16 [-0.14 ; 0.46]	0.30	Ref -0.20 [-0.53 ; 0.14]	0.24	Ref 0.04 [-0.07 ; 0.15]	0.44	Ref -0.24 [-0.50 ; 0.03]	0.08	Ref 0.08 [-0.15 ; 0.30]	0.50
Residential home year construction at 3.5 years of child	>2000 [1970-2000] <1970	Ref 0.06 [-0.28 ; 0.41] 0.09 [-0.25 ; 0.43]	0.72 0.62	Ref 0.12 [-0.26 ; 0.50] 0.20 [-0.17 ; 0.57]	0.54 0.29	Ref 0.05 [-0.07 ; 0.18] 0.02 [-0.11 ; 0.14]	0.40 0.80	Ref -0.01 [-0.31 ; 0.29] 0.23 [-0.07 ; 0.52]	0.93 0.14	Ref 0.19 [-0.06 ; 0.45] 0.22 [-0.03 ; 0.47]	0.14 0.08
Type of floor in the child's room	Tile Lino Carpet Parquet	Ref 0.12 [-0.42 ; 0.66] 0.07 0.71 [-0.07 ; 1.49] 0.34 [-0.10 ; 0.78]	0.66 0.13	Ref 0.71 [0.12 ; 1.31] 0.29 [-0.57 ; 1.14] 0.01 0.61 [0.13 ; 1.09]	0.02 0.51 0.01	Ref -0.05 [-0.25 ; 0.15] 0.02 [-0.26 ; 0.31] -0.07 [-0.24 ; 0.09]	0.62 0.88 0.37	Ref 0.16 [-0.32 ; 0.64] 0.83 [0.15 ; 1.52] 0.27 [-0.11 ; 0.66]	0.51 0.02 0.16	Ref 0.24 [-0.17 ; 0.64] 0.08 [-0.50 ; 0.65] 0.34 [0.01 ; 0.66]	0.25 0.79 0.04
Duration of breastfeeding (months)	<= 1] 1 ; 4] >4	Ref -0.04 [-0.38 ; 0.31] 0.07 [-0.27 ; 0.40]	0.84 0.69	Ref 0.05 [-0.33 ; 0.43] 0.33 [-0.04 ; 0.70]	0.80 0.08	Ref -0.05 [-0.18 ; 0.08] -0.03 [-0.15 ; 0.09]	0.44 0.61	Ref -0.24 [-0.54 ; 0.07] -0.07 [-0.37 ; 0.22]	0.13 0.64	Ref -0.20 [-0.46 ; 0.06] -0.04 [-0.28 ; 0.21]	0.13 0.77
Children's BDE 47 concentration at 3.5 years(ng/g)	<= 0.43] 0.43 ; 1.23] >1.23	Ref 0.20 [-0.15 ; 0.55] 0.03 0.36 [0.03 ; 0.70]	0.26 0.29	Ref -0.13 [-0.52 ; 0.26] -0.20 [-0.58 ; 0.17]	0.51 0.29	Ref 0.02 [-0.11 ; 0.15] 0.13 [0.01 ; 0.26]	0.77 0.03	Ref -0.12 [-0.43 ; 0.19] -0.08 [-0.38 ; 0.22]	0.45 0.58	Ref 0.22 [-0.04 ; 0.47] 0.46 [0.22 ; 0.71]	0.09 <0.01
Socio-demographic											
Mother's education level at 3.5 years of child	<= BAC BAC +2 > BAC	Ref 0.29 [-0.11 ; 0.70] 0.03 [-0.29 ; 0.34]	0.15 0.88	Ref 0.08 [-0.37 ; 0.53] 0.10 [-0.26 ; 0.45]	0.72 0.59	Ref 0.01 [-0.14 ; 0.15] -0.08 [-0.20 ; 0.04]	0.87 0.18	Ref -0.31 [-0.66 ; 0.05] -0.20 [-0.48 ; 0.08]	0.09 0.16	Ref 0.13 [-0.17 ; 0.53] -0.01 [-0.24 ; 0.23]	0.41 0.98
Household income at 3.5 years of child (euros)	<=2999 [3000 ; 3999] >4000	Ref -0.19 [-0.56 ; 0.18] -0.11 [-0.45 ; 0.23]	0.31 0.54	Ref -0.04 [-0.44 ; 0.37] 0.01 [-0.37 ; 0.38]	0.86 0.99	Ref -0.22 [-0.36 ; -0.09] -0.20 [-0.32 ; -0.09]	<0.01 <0.01	Ref -0.06 [-0.38 ; 0.27] -0.14 [-0.44 ; 0.15]	0.73 0.34	Ref -0.05 [-0.32 ; 0.23] -0.13 [-0.38 ; 0.12]	0.75 0.31
Number of persons in the household at 3.5 years of child	<= 3 persons 4 persons >5 persons	Ref -0.17 [-0.53 ; 0.18] -0.02 [-0.41 ; 0.37]	0.34 0.91	Ref -0.09 [-0.48 ; 0.31] 0.16 [-0.27 ; 0.58]	0.67 0.47	Ref -0.11 [-0.24 ; 0.02] -0.15 [-0.29 ; -0.01]	0.11 0.04	Ref 0.11 [-0.20 ; 0.43] 0.13 [-0.21 ; 0.48]	0.47 0.44	Ref -0.06 [-0.32 ; 0.20] -0.13 [-0.42 ; 0.16]	0.65 0.38
Pre-pregnancy BMI	18.5 - < 25	Ref		Ref		Ref		Ref		Ref	

Table S4. Association between OPFR concentrations and potential determinants among children in France (2014-2015).

<18.5	0.04 [-0.60 ; 0.68]	0.90	-1.41 [-2.13 ; -0.70]	<0.01	0.22 [-0.01 ; 0.46]	0.06	-0.71 [-1.32 ; -0.11]	0.02	0.23 [-0.27 ; 0.73]	0.37
25 - < 30	0.35 [-0.75 ; 0.05]	0.10	-0.40 [-0.85 ; 0.05]	0.08	0.11 [-0.26 ; 0.04]	0.14	-0.24 [-0.62 ; 0.14]	0.21	-0.24 [-0.56 ; 0.07]	0.13
30 ou plus	-0.00 [-0.39 ; 0.38]	0.98	-0.74 [-1.17 ; -0.31]	<0.01	0.07 [-0.08 ; 0.21]	0.36	-0.17 [-0.54 ; -0.54]	0.35	0.05 [-0.25 ; 0.35]	0.73
Behavioural										
Time spent outdoors by children at age 3.5 years (hours/week)										
<= 4.5 hours	Ref				Ref				Ref	
] 4.5 ; 7] hours	0.29 [-0.05 ; 0.64]	0.09	0.21 [-0.17 ; 0.58]	0.28	-0.10 [-0.23 ; 0.03]	0.11	0.29 [-0.01 ; 0.58]	0.06	0.13 [-0.12 ; 0.39]	0.30
>7 hours	0.26 [-0.11 ; 0.62]	0.16	-0.19 [-0.59 ; 0.21]	0.36	-0.01 [-0.14 ; 0.13]	0.92	-0.07 [-0.39 ; 0.24]	0.65	0.12 [-0.15 ; 0.39]	0.39
Time spent using electronic devices by children at 3.5 years (hours/week)										
<= 2 hours	Ref				Ref				Ref	
] 2 ; 4] hours	-0.06 [-0.43 ; 0.31]	0.74	-0.45 [-0.85 ; -0.04]	0.03	-0.11 [-0.24 ; 0.03]	0.13	-0.45 [-0.77 ; -0.13]	<0.01	-0.11 [-0.38 ; 0.17]	0.45
>4 hours	-0.22 [-0.55 ; 0.11]	0.19	-0.15 [-0.52 ; 0.21]	0.41	-0.01 [-0.13 ; 0.11]	0.90	-0.06 [-0.35 ; 0.22]	0.66	-0.06 [-0.30 ; 0.19]	0.66
Number of windows in the child's room										
1	Ref				Ref				Ref	
2	-0.14 [-0.55 ; 0.26]	0.48	0.16 [-0.19 ; 0.51]	0.38	0.03 [-0.12 ; 0.18]	0.70	0.38 [0.03 ; 0.74]	0.03	0.01 [-0.29 ; 0.31]	0.93
Ventilation in the child's room										
Yes	Ref				Ref				Ref	
No	-0.16 [-0.48 ; 0.15]	0.31	-0.04 [-0.49 ; 0.41]	0.86	-0.02 [-0.13 ; 0.10]	0.80	-0.13 [-0.41 ; 0.15]	0.35	0.01 [-0.22 ; 0.24]	0.92
Environmental										
Season of children's hair sampling at 3.5 years										
Autumn	Ref				Ref				Ref	
Winter	-0.17 [-0.46 ; 0.12]	0.25	-0.23 [-0.55 ; 0.09]	0.16	-0.08 [-0.18 ; 0.03]	0.15	-0.15 [-0.41 ; 0.10]	0.25	-0.19 [-0.40 ; 0.02]	0.08

OPFR determinants	TDCPP		TEP		TMCP		TPP	
	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P
Sources								
Home renovation work at 3.5 years of child during the year before the survey								
No	Ref		Ref		Ref		Ref	
Yes	-0.26 [-0.58 ; 0.05]	0.10	-0.11 [-0.29 ; 0.08]	0.27	0.19 [-0.23 ; 0.61]	0.38	0.02 [-0.22 ; 0.27]	0.85
Residential home year construction at 3.5 years of child								
>2000	Ref		Ref		Ref		Ref	
[1970-2000]	-0.01 [-0.37 ; 0.35]	0.97	-0.07 [-0.28 ; 0.14]	0.51	0.18 [-0.30 ; 0.66]	0.46	0.14 [-0.13 ; 0.42]	0.31
<1970	-0.02 [-0.38 ; 0.33]	0.90	0.15 [-0.06 ; 0.36]	0.16	0.46 [-0.01 ; 0.93]	0.06	0.22 [-0.05 ; 0.50]	0.11
Type of floor in the child's room								
Tile	Ref		Ref		Ref		Ref	
Lino	0.11 [-0.46 ; 0.68]	0.71	0.29 [-0.04 ; 0.63]	0.08	0.58 [-0.18 ; 1.35]	0.14	0.59 [0.15 ; 1.03]	<0.01
Carpet	0.15 [-0.67 ; 0.96]	0.73	-0.17 [-0.65 ; 0.31]	0.48	0.41 [-0.69 ; 1.50]	0.46	0.57 [-0.05 ; 1.20]	0.07
Parquet	0.21 [-0.26 ; 0.67]	0.38	0.12 [-0.15 ; 0.39]	0.37	0.30 [-0.31 ; 0.92]	0.33	0.36 [0.01 ; 0.71]	0.05
Duration of breastfeeding (months)								
<= 1	Ref		Ref		Ref		Ref	

Table S4. Association between OPFR concentrations and potential determinants among children in France (2014-2015).

[1 ; 4] >4	-0.03 [-0.40 ; 0.33] -0.16 [-0.51 ; 0.19]	0.86 0.38	-0.19 [-0.40 ; 0.03] -0.26 [-0.47 ; -0.06]	0.09 0.01	-0.45 [-0.94 ; 0.03] -0.01 [-0.47 ; 0.46]	0.07 0.98	-0.13 [-0.42 ; 0.15] -0.02 [-0.29 ; 0.25]	0.35 0.89
Children's BDE 47 concentration at 3.5 years(ng/g)								
<= 0.43] 0.43 ; 1.23] >1.23	Ref 0.20 [-0.17 ; 0.57] 0.29 [-0.06 ; 0.65]	0.28 0.11	Ref 0.12 [-0.09 ; 0.34] 0.15 [-0.06 ; 0.36]	0.26 0.17	Ref 0.04 [-0.46 ; 0.53] 0.18 [-0.29 ; 0.66]	0.89 0.45	Ref 0.30 [0.02 ; 0.58] 0.24 [-0.04 ; 0.51]	0.03 0.08
Socio-demographic								
Mother's education level at 3.5 years of child								
<= BAC BAC +2 > BAC	Ref -0.06 [-0.47 ; 0.36] -0.43 [-0.76 ; -0.10]	0.79 0.01	Ref 0.02 [-0.23 ; 0.27] -0.21 [-0.40 ; -0.01]	0.86 0.04	Ref 0.45 [-0.12 ; 1.01] 0.17 [-0.28 ; 0.61]	0.12 0.47	Ref 0.18 [-0.15 ; 0.51] 0.17 [-0.09 ; 0.43]	0.28 0.19
Household income at 3.5 years of child (euros)								
<=2999 [3000 ; 3999] > 4000	Ref -0.47 [-0.85 ; -0.09] -0.49 [-0.84 ; -0.14]	0.01 <0.01	Ref -0.41 [-0.63 ; -0.19] -0.34 [-0.54 ; -0.13]	<0.01 <0.01	Ref -0.37 [-0.88 ; 0.15] -0.24 [-0.72 ; 0.23]	0.16 0.32	Ref -0.17 [-0.47 ; 0.13] -0.09 [-0.37 ; 0.18]	0.26 0.51
Number of persons in the household at 3.5 years of child								
<= 3 persons 4 persons >5 persons	Ref -0.13 [-0.50 ; 0.24] 0.27 [-0.13 ; 0.67]	0.48 0.19	Ref -0.04 [-0.26 ; 0.17] -0.06 [-0.30 ; 0.18]	0.69 0.63	Ref -0.45 [-0.94 ; 0.04] -0.66 [-1.19 ; -0.12]	0.07 0.02	Ref -0.02 [-0.31 ; 0.26] 0.01 [-0.30 ; 0.33]	0.87 0.94
Pre-pregnancy BMI								
18.5 - < 25 <18.5 25 - < 30 30 ou plus	Ref 0.26 [-0.47 ; 1.00] -0.23 [-0.69 ; 0.23] -0.01 [-0.46 ; 0.43]	0.48 0.33 0.95	Ref -0.12 [-0.56 ; 0.31] 0.14 [-0.13 ; 0.42] -0.08 [-0.34 ; 0.18]	0.57 0.29 0.53	Ref -0.54 [-1.44 ; 0.37] -0.52 [-1.09 ; 0.05] -0.39 [-0.93 ; 0.15]	0.24 0.07 0.16	Ref 0.28 [-0.31 ; 0.75] 0.18 [-0.52 ; 0.15] -0.19 [-0.51 ; -0.13]	0.42 0.28 0.24
Behavioural								
Time spent outdoors by children at 3.5 years (hours/week)								
<= 4.5 hours] 4.5 ; 7] hours >7hours	Ref 0.54 [0.19 ; 0.90] 0.43 [0.06 ; 0.81]	<0.01 0.02	Ref -0.06 [-0.27 ; 0.15] -0.20 [-0.42 ; 0.02]	0.58 0.08	Ref 0.26 [-0.21 ; 0.74] -0.24 [-0.74 ; 0.27]	0.28 0.35	Ref 0.26 [-0.02 ; 0.53] -0.07 [-0.37 ; 0.22]	0.07 0.61
Time spent using electronic devices by children at 3.5 years (hours/week)								
<= 2 hours] 2 ; 4] hours >4 hours	Ref -0.53 [-0.91 ; -0.15] -0.21 [-0.56 ; 0.13]	<0.01 0.23	Ref -0.15 [-0.38 ; 0.08] -0.04 [-0.25 ; 0.16]	0.19 0.69	Ref -0.31 [-0.83 ; 0.20] -0.01 [-0.47 ; 0.46]	0.23 0.98	Ref -0.34 [-0.63 ; -0.04] -0.30 [-0.57 ; -0.04]	0.02 0.03
Number of windows in the child's room								
1 2	Ref 0.41 [-0.01 ; 0.83]	0.06	Ref 0.19 [-0.06 ; 0.44]	0.13	Ref 0.19 [-0.38 ; 0.76]	0.51	Ref -0.14 [-0.47 ; 0.19]	0.40
Ventilation in the child's room								
Yes No	Ref -0.36 [-0.69 ; -0.03]	0.03	Ref -0.11 [-0.31 ; 0.08]	0.26	Ref -0.39 [-0.83 ; 0.05]	0.08	Ref -0.23 [-0.49 ; 0.02]	0.07
Environmental								
Season of children's hair sampling at 3.5 years								
Autumn Winter	Ref -0.54 [-0.84 ; -0.25]	<0.01	Ref -0.04 [-0.22 ; 0.14]	0.65	Ref -0.04 [-0.44 ; 0.37]	0.85	Ref -0.25 [-0.48 ; -0.01]	0.04

Table S5. Unweighted results of association between OPFR concentrations and potential determinants among mothers (n=388) at birth in France (2011).

Table S5. Unweighted results of association between OPFR concentrations and potential determinants among mothers ($n=388$) at birth in France (2011).

Autumn Summer	Ref 0.22 [0.01 ; 0.42]	0.04	Ref -0.12 [-0.27 ; 0.03]	0.11	Ref 0.01 [-0.08 ; 0.09]	0.96	Ref -0.07 [-0.33 ; 0.19]	0.59
Number of people in the household at birth								
<=3 persons	Ref		Ref		Ref		Ref	
4 persons	0.12 [-0.09 ; 0.33]	0.27	0.12 [-0.04 ; 0.27]	0.13	-0.01 [-0.09 ; 0.08]	0.86	0.07 [-0.19 ; 0.34]	0.59
>5 persons	0.25 [-0.01 ; 0.52]	0.06	0.12 [-0.08 ; 0.31]	0.24	-0.01 [-0.11 ; 0.10]	0.91	-0.04 [-0.38 ; 0.29]	0.81

Table S5. Unweighted results of association between OPFR concentrations and potential determinants among mothers (n=388) at birth in France (2011).

Autumn Summer	Ref 0.02 [-0.13 ; 0.18]	0.76	Ref 0.08 [-0.20 ; 0.36]	0.56	Ref 0.04 [-0.13 ; 0.21]	0.65	Ref 0.46 [0.04 ; 0.68]	0.03	Ref 0.08 [-0.13 ; 0.29]	0.45
Number of people in the household at birth										
<=3 persons	Ref		Ref		Ref		Ref		Ref	
4 persons	0.01 [-0.15 ; 0.18]	0.86	-0.03 [-0.32 ; 0.26]	0.82	-0.08 [-0.25 ; 0.10]	0.38	-0.21 [-0.54 ; 0.12]	0.22	-0.02 [-0.24 ; 0.19]	0.83
>5 persons	0.02 [-0.19 ; 0.22]	0.88	0.02 [-0.34 ; 0.39]	0.89	-0.01 [-0.21 ; 0.23]	0.91	-0.12 [-0.54 ; 0.29]	0.57	-0.14 [-0.41 ; 0.13]	0.30

Table S6. Unweighted results of association between OPFR concentrations and potential determinants among children (n=259) at 3.5 years old in France (2014-2015).

Table S6. Unweighted results of association between OPFR concentrations and potential determinants among children (n=259) at 3.5 years old in France (2014-2015).

18.5 - < 25	ref		ref	ref	ref	ref	ref	ref	ref	ref	
<18.5	-0.14 [-0.70 ; 0.42]	0.63	-0.75 [-1.40 ; -0.10]	0.02	0.09 [-0.13 ; 0.31]	0.42	-0.06 [-0.55 ; 0.43]	0.80	0.33 [-0.09 ; 0.76]	0.12	
25 - < 30	0.05 [-0.35 ; 0.45]	0.82	-0.19 [-0.65 ; 0.27]	0.42	0.06 [-0.10 ; 0.22]	0.47	0.06 [-0.29 ; 0.40]	0.75	-0.09 [-0.09 ; 0.76]	0.55	
30 ou plus	0.56 [0.02 ; 1.11]	0.04	-0.450.30 [-1.08 ; 0.18]	0.16	0.08 [-0.13 ; 0.30]	0.46	0.16 [-0.32 ; 0.63]	0.51	0.04 [-0.37 ; 0.45]	0.85	
Behavioural											
Time spent outside by children at age 3.5 years (hours/week)											
<= 4.5 hours	ref		ref	ref	ref	ref	ref	ref	ref	ref	
] 4.5 ; 7] hours	0.11 [-0.23 ; 0.44]	0.53	0.04 [-0.34 ; 0.44]	0.80	-0.13 [-0.26 ; 0.01]	0.06	0.19 [-0.09 ; 0.48]	0.20	0.03 [-0.23 ; 0.28]	0.84	
>7hours	0.24 [-0.12 ; 0.61]	0.19	-0.15 [-0.57 ; 0.27]	0.49	-0.05 [-0.19 ; 0.09]	0.49	-0.06 [-0.38 ; 0.25]	0.69	0.04 [-0.24 ; 0.31]	0.79	
Time spent using electronic devices by children at 3.5 years (hours/week)											
<= 2 hours	ref		ref	ref	ref	ref	ref	ref	ref	ref	
] 2 ; 4] hours	0.01 [-0.35 ; 0.36]	0.99	-0.27 [-0.67 ; 0.13]	0.19	-0.01 [-0.14 ; 0.13]	0.91	-0.29 [-0.58 ; 0.01]	0.06	-0.12 [-0.38 ; 0.15]	0.38	
>4 hours	-0.07 [-0.41 ; 0.28]	0.71	-0.18 [-0.58 ; 0.21]	0.36	0.03 [-0.10 ; 0.17]	0.63	-0.01 [-0.29 ; 0.29]	0.98	0.03 [-0.23 ; 0.28]	0.82	
Number of windows in the child's room											
1	ref		ref	ref	ref	ref	ref	ref	ref	ref	
2	-0.01 [-0.40 ; 0.39]	0.92	0.12 [-0.34 ; 0.58]	0.61	0.03 [-0.12 ; 0.19]	0.63	0.42 [0.09 ; 0.76]	0.01	0.20 [-0.10 ; 0.50]	0.18	
Ventilation in the child's room											
Yes	ref		ref	ref	ref	ref	ref	ref	ref	ref	
No	-0.08 [-0.39 ; 0.23]	0.62	0.23 [-0.13 ; 0.59]	0.21	0.01 [-0.11 ; 0.13]	0.89	-0.02 [-0.29 ; 0.25]	0.86	0.15 [-0.08 ; 0.39]	0.20	
Environmental											
Season of children's hair sampling at 3.5 years											
Autumn	ref		ref	ref	ref	ref	ref	ref	ref	ref	
Winter	0.01 [-0.29 ; 0.32]	0.92	-0.14 [-0.49 ; 0.20]	0.41	-0.08 [-0.19 ; 0.03]	0.19	-0.08 [-0.34 ; 0.18]	0.54	-0.12 [-0.35 ; 0.10]	0.29	

OPFR determinants	TDCPP		TEP		TMCP		TPP	
	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P	β [IC95%]	P
Sources								
Home renovation work at 3.5 years of child during the year before the survey								
No	ref		ref	ref	ref	ref	ref	
Yes	0.23 [-0.08 ; 0.54]	0.15	0.09 [-0.09 ; 0.27]	0.34	-0.29 [-0.72 ; 0.12]	0.17	-0.01 [-0.26 ; 0.23]	0.90
Residential home year construction at 3.5 years of child								
>2000 [1970-2000]	ref		ref	ref	ref	ref	ref	
<1970	0.05 [-0.31 ; 0.42] 0.09 [-0.25 ; 0.43]	0.78 0.60	-0.05 [-0.26 ; 0.16] 0.12 [-0.07 ; 0.32]	0.63 0.21	0.46 [-0.03 ; 0.95] 0.54 [0.09 ; 0.99]	0.07 0.01	0.08 [-0.20 ; 0.36] 0.21 [-0.05 ; 0.47]	0.58 0.12
Type of floor in the child's room								
Tile	ref		ref	ref	ref	ref	ref	
Lino	-0.09 [-0.70 ; 0.51]	0.76	0.32 [-0.01 ; 0.69]	0.06	0.60 [-0.22 ; 1.41]	0.15	0.33 [-0.13 ; 0.80]	0.16
Carpet	-0.15 [-0.94 ; 0.63]	0.70	-0.12 [-0.57 ; 0.32]	0.59	0.45 [-0.61 ; 1.51]	0.40	0.44 [-0.17 ; 1.05]	0.15
Parquet	-0.13 [-0.63 ; 0.38]	0.63	0.06 [-0.23 ; 0.35]	0.68	0.28 [-0.40 ; 0.97]	0.42	0.18 [-0.21 ; 0.87]	0.36

Table S6. Unweighted results of association between OPFR concentrations and potential determinants among children (n=259) at 3.5 years old in France (2014-2015).

Duration of breastfeeding (months)								
<= 1	ref							
] 1 ; 4]	-0.10 [-0.45 ; 0.25]	0.57	ref	-0.10 [-0.30 ; 0.10]	0.31	ref	0.38	ref
>4	-0.09 [-0.44 ; 0.26]	0.62	-0.26 [-0.46 ; 0.07]	<0.01	0.21 [-0.26 ; 0.68]	0.35	0.05 [-0.22 ; 0.33]	0.70
Children's BDE 47 concentration at 3.5 years(ng/g)								
<= 0.43	ref							
] 0.43 ; 1.23]	0.19 [-0.16 ; 0.54]	0.28	ref	0.13 [-0.08 ; 0.33]	0.22	ref	0.85	ref
>1.23	0.40 [0.05 ; 0.75]	0.02	0.07 [-0.13 ; 0.27]	0.51	0.24 [-0.24 ; 0.72]	0.32	0.28 [0.01 ; 0.55]	0.04
0.03 [-0.25 ; 0.30]							0.24 [-0.03 ; 0.51]	0.08
Socio-demographic								
Mother's education level at 3.5 years of child								
<= BAC	ref							
BAC +2	-0.09 [-0.51 ; 0.32]	0.65	ref	0.04 [-0.20 ; 0.28]	0.74	ref	0.93	ref
> BAC	-0.46 [-0.81 ; -0.11]	0.01	-0.19 [-0.40 ; 0.01]	0.06	0.03 [-0.45 ; 0.52]	0.88	0.11 [-0.22 ; 0.44]	0.52
Household income at 3.5 years of child (euros)								
<=2999	ref							
[3000 ; 3999]	-0.16 [-0.57 ; 0.25]	0.44	ref	-0.27 [-0.50 ; -0.03]	0.03	ref	0.82	ref
> 4000	-0.30 [-0.66 ; 0.07]	0.11	-0.24 [-0.44 ; -0.03]	0.03	-0.21 [-0.71 ; 0.28]	0.40	-0.09 [-0.42 ; 0.23]	0.55
Number of persons in the household at 3.5 years of child								
<= 3 persons	ref							
4 persons	-0.12 [-0.47 ; 0.24]	0.52	ref	-0.07 [-0.28 ; 0.14]	0.51	ref	0.06	ref
>5 persons	0.25 [-0.15 ; 0.66]	0.21	0.03 [-0.21 ; 0.26]	0.85	-0.46 [-1.00 ; 0.09]	0.13	-0.18 [-0.46 ; 0.10]	0.20
Pre-pregnancy BMI								
18.5 - < 25	ref							
<18.5	-0.10 [-0.67 ; 0.48]	0.74	ref	0.08 [0.24; 0.41]	0.61	ref	0.49	ref
25 - < 30	0.18 [-0.23 ; 0.60]	0.37	0.32 [0.10 ; 0.56]	<0.01	0.06 [-0.50 ; 0.61]	0.84	0.07 [-0.25 ; 0.39]	0.65
30 ou plus	0.18 [-0.38 ; 0.74]	0.53	-0.04 [-0.36 ; 0.28]	0.82	0.45 [-0.31 ; 1.22]	0.24	0.10 [-0.33 ; 0.54]	0.64
Behavioural								
Time spent outside by children at age 3.5 years (hours/week)								
<= 4.5 hours	ref							
] 4.5 ; 7] hours	0.44 [0.10 ; 0.78]	0.01	ref	-0.05 [-0.25 ; 0.14]	0.59	ref	0.15	ref
>7hours	0.43 [0.06 ; 0.79]	0.02	-0.15 [-0.36 ; 0.07]	0.18	-0.09 [-0.58 ; 0.43]	0.74	-0.01 [-0.29 ; 0.28]	0.13
Time spent using electronic devices by children at 3.5 years (hours/week)								
<= 2 hours	ref							
] 2 ; 4] hours	-0.21 [-0.56 ; 0.15]	0.25	ref	-0.12 [-0.33 ; 0.08]	0.23	ref	0.32	ref
>4 hours	-0.10 [-0.44 ; 0.25]	0.58	0.01 [-0.19 ; 0.21]	0.90	0.02 [-0.45 ; 0.49]	0.93	-0.16 [-0.43 ; 0.12]	0.26
Number of windows in the child's room								
1	ref							
2	0.40 [0.01 ; 0.82]	0.04	ref	0.01 [-0.17 ; 0.20]	0.88	ref	0.69	ref
Ventilation in the child's room								
Yes	ref							
No	-0.12 [-0.44 ; 0.20]	0.45	ref	0.17 [-0.05 ; 0.41]	0.13	ref	0.79	ref
-0.06 [-0.49 ; 0.38]							-0.10 [-0.35 ; 0.15]	0.43
Environmental								
Season of children's hair sampling at 3.5 years								
Autumn	ref							
Winter	-0.29 [-0.60 ; 0.01]	0.06	ref	-0.08 [-0.25 ; 0.10]	0.37	ref	0.72	ref
0.08 [-0.33 ; 0.49]							0.13 [-0.37 ; 0.11]	0.29

Table S7. PBDE and PCB concentrations (ng/g) in mothers' hair at birth in 2011 and in children hair aged 3.5 years old in 2014-2015 in France.

Substances	CAS number	% > LOD	Populations	Min	P25	P50	P75	P95	Max	Geometric mean (SD)
BDE 28	41318-75-6	11.49	Mothers	-	-	-	-	-	-	-
		1.9	Children	-	-	-	-	-	-	-
BDE 47	5436-43-1	47.26	Mothers	0.02	0.86	2.51	8.35	42	498	2.47 (1.18)
		21.6	Children	0.04	0.27	0.6	1.66	6.55	26	0.66 (1.17)
BDE 85	182346-21-0	0.26	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
BDE 99	60348-60-9	18.28	Mothers	-	-	-	-	-	-	-
		4.2	Children	-	-	-	-	-	-	-
BDE 100	189084-64-8	3.13	Mothers	-	-	-	-	-	-	-
		0.4	Children	-	-	-	-	-	-	-
BDE 119	189084-66-0	0	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
BDE 153	68631-49-2	7.31	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
BDE 154	207122-15-4	1.04	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
BDE 209	1163-19-5		Mothers	0.17	4.33	7.8	17	61	452	8.39 (1.11)
PCB 28	7012-37-5	99.48	Mothers	0.2	0.83	1.26	5.87	11	23	1.79 (1.09)
		91.1	Children	0.06	0.39	0.56	1.24	2.96	5.66	0.7 (1.10)
PCB 31	16606-02-3	99.48	Mothers	0.2	0.92	1.3	6.53	13	26	1.96 (1.10)
		95	Children	0.06	0.38	0.64	1.34	3.91	7.25	0.73 (1.11)
PCB 52	35693-99-3	100	Mothers	0.23	1.36	2.02	6.36	13	27	2.61 (1.09)
		96.5	Children	0.06	0.51	0.88	1.44	3.12	8.31	0.84 (1.09)
PCB 77	32598-13-3	0	Mothers	-	-	-	-	-	-	-
		1.1	Children	-	-	-	-	-	-	-

PCB 101	37680-73-2	99.74	Mothers	0.22	1.20	1.83	2.94	6.26	18	1.88 (1.06)
		95.4	Children	0.09	0.51	0.8	1.28	2.3	9.19	0.78 (1.08)
PCB 105	32598-14-4	6.53	Mothers	-	-	-	-	-	-	-
		6.5	Children	-	-	-	-	-	-	-
PCB 118	31508-00-6	26.9	Mothers	0.61	0.67	0.7	0.77	1.66	33	0.83 (1.03)
		9.6	Children	-	-	-	-	-	-	-
PCB 126	57465-28-8	0.5	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
PCB 138	35065-28-2	9.7	Mothers	-	-	-	-	-	-	-
		3.8	Children	-	-	-	-	-	-	-
PCB 153	35065-27-1	0.26	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
PCB 180	35065-29-3	4.96	Mothers	-	-	-	-	-	-	-
		2.3	Children	-	-	-	-	-	-	-

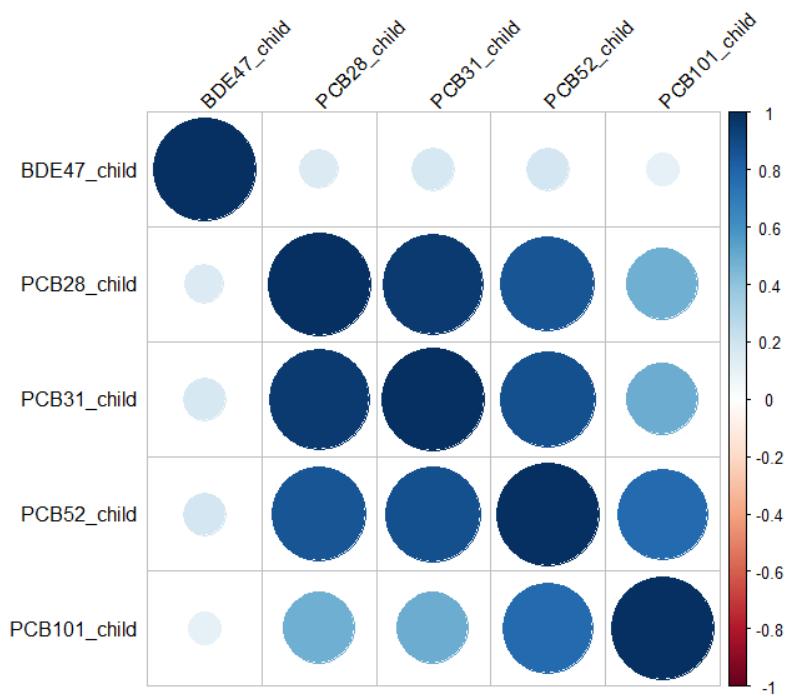


Fig S8. Weighted correlation matrix of PBDE and PCB concentrations among children in France (2014-2015).

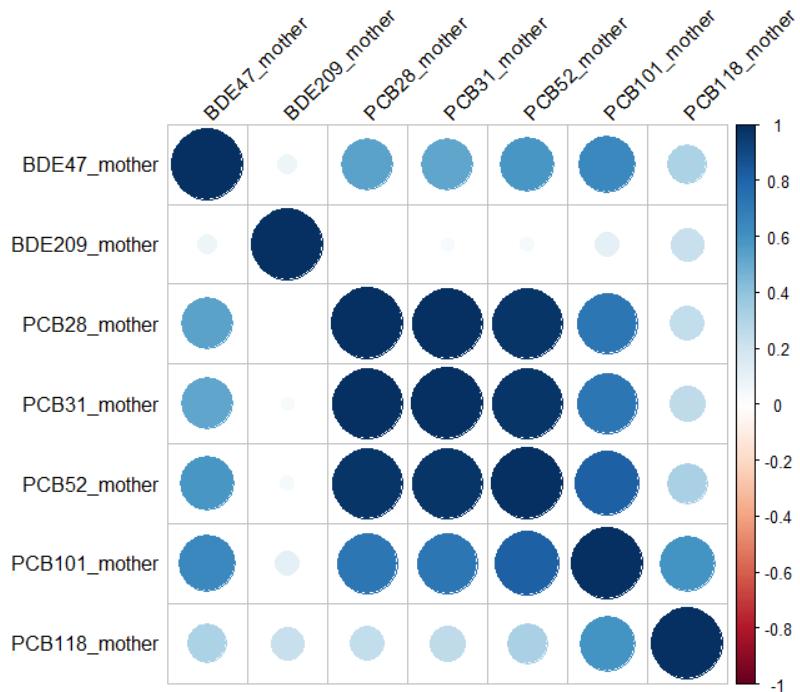


Fig S9. Weighted correlation matrix of PBDE and PCB concentrations among mothers in France (2011).

Table S8. Unweighted PBDE and PCB concentrations (ng/g) in mothers at birth (n=388) in 2011 and in children aged 3.5 years old (n=259) in 2014-2015.

Substances	CAS number	% > LOD	Populations	Min	P25	P50	P75	P95	Max	Geometric mean (SD)
BDE 28	41318-75-6	11.49	Mothers	-	-	-	-	-	-	-
		1.9	Children	-	-	-	-	-	-	-
BDE 47	5436-43-1	47.26	Mothers	0.018	0.67	1.83	5.67	28.56	498	1.86 (5.75)
		21.6	Children	0.04	0.3	0.72	1.69	6.26	26.3	0.71 (3.43)
BDE 85	182346-21-0	0.26	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
BDE 99	60348-60-9	18.28	Mothers	-	-	-	-	-	-	-
		4.2	Children	-	-	-	-	-	-	-
BDE 100	189084-64-8	3.13	Mothers	-	-	-	-	-	-	-
		0.4	Children	-	-	-	-	-	-	-
BDE 119	189084-66-0	0	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
BDE 153	68631-49-2	7.31	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
BDE 154	207122-15-4	1.04	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
BDE 209	1163-19-5		Mothers	0.17	4.4	7.9	15.8	57.73	452	8.22 (3.36)
			Children	-	-	-	-	-	-	-
PCB 28	7012-37-5	99.48	Mothers	0.2	0.75	1.17	2.18	10.57	23.56	1.52 (2.76)
		91.1	Children	0.06	0.34	0.55	1.05	3.44	5.66	0.62 (2.50)
PCB 31	16606-02-3	99.48	Mothers	0.2	0.8	1.24	2.50	12.31	25.98	1.65 (2.89)
		95	Children	0.06	0.33	0.54	1.03	3.92	7.25	0.65 (2.48)
PCB 52	35693-99-3	100	Mothers	0.23	1.28	1.87	3.4	12.6	26.88	2.29 (2.46)
		96.5	Children	0.06	0.46	0.78	1.29	3.18	8.31	0.81 (2.23)
PCB 77	32598-13-3	0	Mothers	-	-	-	-	-	-	-

		1.1	Children	-	-	-	-	-	-	-
PCB 101	37680-73-2	99.74	Mothers	0.22	1.14	1.77	2.66	5.4	18.51	1.76 (1.97)
		95.4	Children	0.09	0.5	0.75	1.32	2.56	9.19	0.77 (2.12)
PCB 105	32598-14-4	6.53	Mothers	-	-	-	-	-	-	-
		6.5	Children	-	-	-	-	-	-	-
PCB 118	31508-00-6	26.9	Mothers	0.61	0.67	0.70	1	1.7	32.7	0.84 (1.47)
		9.6	Children	-	-	-	-	-	-	-
PCB 126	57465-28-8	0.5	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
PCB 138	35065-28-2	9.7	Mothers	-	-	-	-	-	-	-
		3.8	Children	-	-	-	-	-	-	-
PCB 153	35065-27-1	0.26	Mothers	-	-	-	-	-	-	-
		0	Children	-	-	-	-	-	-	-
PCB 180	35065-29-3	4.96	Mothers	-	-	-	-	-	-	-
		2.3	Children	-	-	-	-	-	-	-

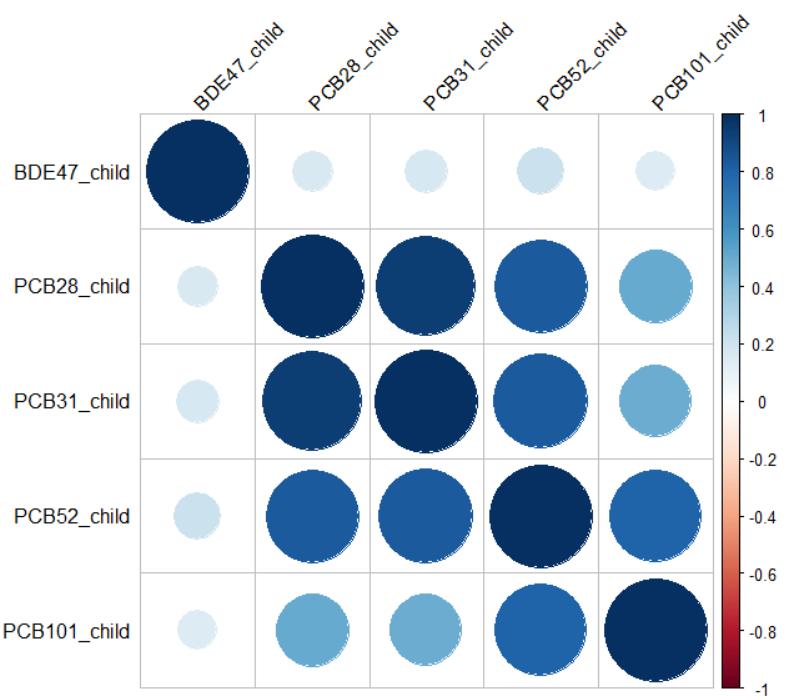


Fig S10. Unweighted correlation matrix of PBDE and PCB concentrations among children (n=259) in France (2014-2015).

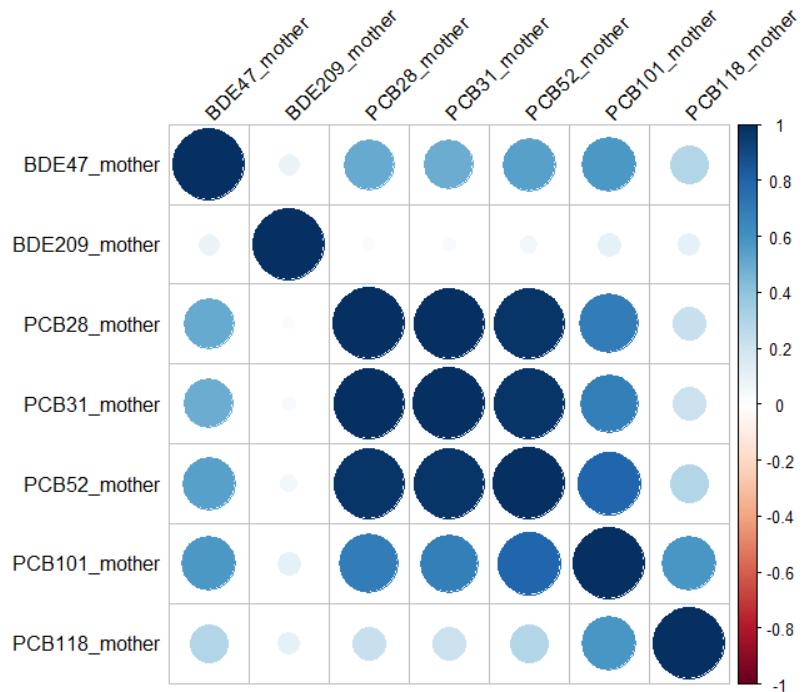


Fig S11. Unweighted correlation matrix of PBDE and PCB concentrations among mothers (n=388) in France (2011).