## **Cover Page for Supporting Information**

Manuscript title: POLYBROMINATED DIPHENYL ETHERS, POLYCHLORINATED BIPHENYLS AND PERSISTENT PESTICIDES IN SERUM FROM THE NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY: 2003 – 2008

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**Table S1.** Number of serum pools created by race/ethnicity, age group, sex, and survey period. Eight samples were included in each pool except where noted.

	A		Number of s	serum pools	
Race/Ethnicity	Age - (Years) -	NHANES 2	2005/06	NHANES 2	007/08
	(Tears) -	Females	Males	Females	Males
Mexican American	12-19	16	11	5 <sup>1</sup>	6
(MA)	20-39	9	9	8	9 <sup>1</sup>
	40-59	6	4	6 <sup>2</sup>	6
	≥60	3	4	5 <sup>3</sup>	5 <sup>1</sup>
Non-Hispanic Black	12-19	14	13	5 4	6 <sup>4</sup>
(NHB)	20-39	7	6	8 <sup>5</sup>	6
	40-59	7	5	<b>8</b> <sup>5</sup>	6
	≥60	5	5	7 1	8
Non-Hispanic White	12-19	10	9	7 4	6
(NHW)	20-39	16	12	13 <sup>2</sup>	15
	40-59	13	12	17	16
	≥60	17	15	21	23
Other	All	9 <sup>6</sup>	; 	10	7

<sup>&</sup>lt;sup>1</sup> One six sample pool. <sup>2</sup> One 3 sample pool. <sup>3</sup> One 7 sample pool. <sup>4</sup> One 5 sample pool. <sup>5</sup> One 4 sample pool. <sup>6</sup> One 6 sample pool and one 7 sample pool.

<sup>&</sup>lt;sup>7</sup> Two 5 sample pools and one 7 sample pool.

**Table S2.** International Union of Pure and Applied Chemistry (IUPAC) name and common abbreviation for persistent organic pollutants measured in NHANES 2003/04 (Individual samples) and NHANES 2005/06 and 2007/08 (pooled samples). Median concentration (pg/g serum) detectable in blank samples and limit of detection for NHANES 2005/06 and 2007/08.

IUPAC Name	Abbreviation —		(pg/g serum) od blanks	Limit of Detec	ction (pg/g serum)
TOT AC Name	Abbreviation —	NHANES 2005/06	NHANES 2007/08	NHANES 2005/06	NHANES 2007/08
Brominated Flame Retardants (BFRs)	Polybrominated	Diphenyl Ethers (	'PBDEs)		
2,2',4-Tribromodphenyl ether	PBDE17	0	0	2.5 1	2.5 <sup>1</sup>
2,4,4'-Tribromodiphenyl ether	PBDE28	0	0	2.5 1	2.5 <sup>1</sup>
2,2',4,4'-Tetrabromodiphenyl ether	PBDE47	5.8	5.4	6.7 <sup>2</sup>	2.5 <sup>1</sup>
2,3',4,4'-Tetrabromodiphenyl ether	PBDE66	0	0	2.5 1	2.5 <sup>1</sup>
2,2',3,4,4'-Pentabromodiphenyl ether	PBDE85	0	0	2.5 1	2.5 <sup>1</sup>
2,2',4,4',5-Pentabromodiphenyl ether	PBDE99	4.5	4	4.8 <sup>2</sup>	2.5 <sup>1</sup>
2,2',4,4',6-Pentabromodiphenyl ether	PBDE100	0	0	2.5 1	2.5 1
2,2',4,4',5,5'-Hexabromodiphenyl ether	PBDE153	0	0	2.5 <sup>1</sup>	2.5 <sup>1</sup>
2,2',4,4',5,6'-Hexabromodiphenyl ether	PBDE154	0	0	2.5 <sup>1</sup>	2.5 <sup>1</sup>
2,2',3,4,4',5',6-Heptabromodiphenyl ether	PBDE183	0	0	2.5 <sup>1</sup>	2.5 <sup>1</sup>
Decabromodiphenyl ether	PBDE209	6.9	0	25 <sup>1</sup>	25 <sup>1</sup>
2,2',4,4',5,5'-Hexabromobiphenyl	PBB153	0	0	2.5 1	2.5 1
Persistent Pesticides	Persistent Pestic	ides			
p,p'-Dichlorodiphenyldichloroethylene	p,p'-DDE	16.5	4.6	33.0 <sup>2</sup>	6.2 <sup>1</sup>
o,p'-Dichlorodiphenyltrichloroethane	o,p'-DDT	0	0	6.2 <sup>1</sup>	6.2 <sup>1</sup>
p,p'-Dichlorodiphenyltrichloroethane	p,p'-DDT	0	0	6.2 1	6.2 1
Hexachlorobenzene	НСВ	37.8	8.4	17.1 <sup>2</sup>	6.2 <sup>1</sup>
β-Hexachlorocyclohexane	β-нссн	0	0	6.2 <sup>1</sup>	6.2 <sup>1</sup>
γ-Hexachlorocyclohexane	ү-НССН	0	0	6.2 <sup>1</sup>	6.2 <sup>1</sup>

				1	4
Mirex	MIREX	0	0	6.2 1	6.2 1
trans-Nonachlor	T-NONA	2.6	0	6.3 <sup>2</sup>	6.2 1
Oxychlordane	OXYCHLOR	0	0	6.2 1	6.2 1
Polychlorinated Biphenyls (PCBs)	Polychlorinated I	Biphenyls (PCBs)			
2,4,4'-Trichlorobiphenyl	PCB28	21.1	1.7	10.4 <sup>2</sup>	3.1 2
2,2',3,5'-Tetrachlorobiphenyl	PCB44	1.3	0	1.5 <sup>2</sup>	1.2 1
2,2',4,5'-Tetrachlorobiphenyl	PCB49	1.2	0	1.2 1	1.2 1
2,2',5,5'-Tetrachlorobiphenyl	PCB52	2.3	0.5	1.4 2	1.2 1
2,3',4,4'-Tetrachlorobiphenyl	PCB66	1.6	0	1.7 <sup>2</sup>	1.2 1
2,4,4',5-Tetrachlorobiphenyl	PCB74	0	1.5	1.2 1	3.6 <sup>2</sup>
2,2',3,4,5'-Pentachlorobiphenyl	PCB87	0	0	1.2 <sup>1</sup>	1.2 1
2,2',4,4',5-Pentachlorobiphenyl	PCB99	0	0	1.2 1	1.2 1
2,2',4,5,5'-Pentachlorobiphenyl	PCB101	1.1	0	2.4 <sup>2</sup>	1.2 1
2,3,3',4,4'-Pentachlorobiphenyl	PCB105	0	0	1.2 <sup>1</sup>	1.2 1
2,3,3',4',6-Pentachlorobiphenyl	PCB110	0.8	0	1.2 <sup>1</sup>	1.2 1
2,3,4,4',5-Pentachlorobiphenyl	PCB114	0	0	1.2 1	1.2 1
2,3',4,4',5-Pentachlorobiphenyl	PCB118	1	0	2.9 <sup>2</sup>	1.2 1
2,3',4,4',5'-Pentachlorobiphenyl	PCB123	0	0	1.2 <sup>1</sup>	1.2 1
2,2',3,3',4,4'-Hexachlorobiphenyl	PCB128	0	0	1.2 <sup>1</sup>	1.2 1
2,2',3,4,4',5'- and 2,3,3',4,4',6- Hexachlorobiphenyl	PCB138-158	0	0	1.2 1	1.2 1
2,2',3,4',5,5'-Hexachlorobiphenyl	PCB146	0	0	1.2 1	1.2 1
2,2',3,4',5',6-Hexachlorobiphenyl	PCB149	0	0	1.2 1	1.2 1
2,2',3,5,5',6-Hexachlorobiphenyl	PCB151	0	0	1.2 1	1.2 1
2,2',4,4',5,5'-Hexachlorobiphenyl	PCB153	1.4	0	1.3 2	1.2 1
2,3,3',4,4',5-Hexachlorobiphenyl	PCB156	0	0	1.2 1	1.2 1
2,3,3',4,4',5'-Hexachlorobiphenyl	PCB157	0	0	1.2 1	1.2 1
2,3',4,4',5,5'-Hexachlorobiphenyl	PCB167	0	0	1.2 <sup>1</sup>	1.2 1
2,2',3,3',4,4',5-Heptachlorobiphenyl	PCB170	0	0	1.2 <sup>1</sup>	1.2 1
2,2',3,3',4,5,5'-Heptachlorobiphenyl	PCB172	0	0	1.2 1	1.2 <sup>1</sup>
2,2',3,3',4',5,6-Heptachlorobiphenyl	PCB177	0	0	1.2 1	1.2 1
2,2',3,3',5,5',6-Heptachlorobiphenyl	PCB178	0	0	1.2 1	1.2 1

2,2',3,4,4',5,5'-Heptachlorobiphenyl	PCB180	0	0	1.2 1	1.2 1	
2,2',3,4,4',5',6-Heptachlorobiphenyl	PCB183	0	0	1.2 1	1.2 1	
2,2',3,4',5,5',6-Heptachlorobiphenyl	PCB187	0	0	1.2 1	1.2 1	
2,3,3',4,4',5,5'-Heptachlorobiphenyl	PCB189	0	0	1.2 1	1.2 1	
2,2',3,3',4,4',5,5'-Octachlorobiphenyl	PCB194	0	0	1.2 1	1.2 1	
2,2',3,3',4,4',5,6-Octachlorobiphenyl	PCB195	0	0	1.2 1	1.2 1	
2,2',3,3',4,4',5,6'- and 2,2',3,4,4',5,5',6- Octachlorobiphenyl	PCB196-203	0	0	1.2 1	1.2 1	
2,2',3,3',4,5,6,6'-Octachlorobiphenyl	PCB199	0	0	1.2 1	1.2 1	
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	PCB206	0	0	1.2 1	1.2 1	
Decachlorobiphenyl	PCB209	0	0	1.2 1	1.2 1	

<sup>&</sup>lt;sup>1</sup> Instrumental limit of detection defined as signal to noise greater than 3. <sup>2</sup> Limit of detection defined as three times the standard deviation of method blanks analyzed in parallel with unknown samples.

**Table S3.** International Union of Pure and Applied Chemistry (IUPAC) name and common abbreviation for persistent organic pollutants detectable in over 50% of any demographic group (sex, age, race ethnicity) NHANES pooled serum samples.

	Detection Fi	requency (%)
IUPAC Name and Common Abbreviation	NHANES 2005/06	NHANES 2007/08
	Mean (Range)	Mean (Range)
Polybrominated Diphenyl Ethers		
2,4,4'-Tribromodiphenyl ether (PBDE28)	97.7 (80 - 100)	100
2,2',4,4'-Tetrabromodiphenyl ether (PBDE47)	100	100
2,2',3,4,4'-Tentabromodiphenyl ether (PBDE85)	84.9 (53.8 - 100)	82.9 (58.8 - 100)
2,2',4,4',5-Pentabromodiphenyl ether (PBDE99)	100	100
2,2',4,4',6-Pentabromodiphenyl ether (PBDE100)	100	100
2,2',4,4',5,5'-Hexabromodiphenyl ether (PBDE153)	100	100
Polychlorinated Biphenyls		
2,4,4',5-Tetrachlorobiphenyl (PCB74)	98.5 (85.7 - 100)	97.7 (80 - 100)
2,2',4,4',5-Pentachlorobiphenyl (PCB99)	99.6 (90.9 - 100)	98.7 (83.3 - 100)
2,3',4,4',5-Pentachlorobiphenyl (PCB118)	100	99.2 (80 - 100)
2,2',3,4,4',5'- and 2,3,3',4,4',6-Hexachlorobiphenyl (PCB138-158)	99.7 (93.8 - 100)	99.3 (83.3 - 100)
2,2',4,4',5,5'-Hexachlorobiphenyl (PCB153)	100	99.3 (83.3 - 100)
2,2',3,4,4',5,5'-Heptachlorobiphenyl (PCB180)	99.4 (90.9 - 100)	100
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (PCB194)	93.8 (64.3 - 100)	91.4 (60 - 100)
Persistent Pesticides		
Hexachlorobenzene (HCB)	99.1 (85.7 - 100)	100
2,2-Bis(4-chlorophenyl)-1,1-dichloroethene (PP-DDE)	100	100

**Table S4.** Arithmetic mean concentration (ng/g lipid) of 2,4,4′-tribromodiphenyl ether (PBDE28) and 2,2′,4,4′-tetrabromodiphenyl ether (PBDE47) in pooled serum samples from NHANES participants by age group, survey period, ethnicity, and sex with 95% confidence interval (95%CI). All pairwise comparisons between each ethnic group within each sex group and between each sex within ethnic group have been given. ↑ indicates significant higher concentration compared with comparison group (non-overlap of 95%CI).

			Concentration	n (ng/g lipid) wit	h 95%CI by ethnic	ity and gender			Which o	of two compar	asion group	s are highe	er. No differen	ce denoted	l with ""	
Age Group	Survey Period	N	ЛΑ		NHB	NI	HW	Overlap	of 95% CI	for Females	Overla	of 95% CI	for Males	Overlap	of 95% CI b	y Gender
		Females	Males	Females	Males	Females	Males	MA/NHB	MA/NHV	V NHB/NHW	MA/NHB	MA/NHW	NHB/NHW	MA	NHB	NHW
2.4.4'-Tribro	omodiphenyl ether	(PRDF28)														
12-19	2003-04	2.1 ± 0.7	2.4 ± 0.6	1.4 ± 0.2	2.0 ± 0.8	1.5 ± 0.5	2.4 ± 0.5									
12 15	2005-06	2.1 ± 0.6	2.0 ± 0.5	2.3 ± 0.7	1.8 ± 0.6	2.4 ± 1.3	1.8 ± 1.0									
	2007-08	1.5 ± 1.0	2.1 ± 1.1	1.7 ± 1.3	1.2 ± 0.4	1.3 ± 0.4	1.4 ± 0.4									
20-39	2003-04	1.8 ± 0.6	1.9 ± 0.4	2.1 ± 0.9	1.9 ± 0.8	2.0 ± 0.7	1.7 ± 0.6									
20-39	2003-04	1.8 ± 0.8 1.5 ± 0.3	1.9 ± 0.4 2.0 ± 0.3	1.9 ± 0.8	1.9 ± 0.8 1.4 ± 0.4	2.0 ± 0.7 1.7 ± 0.8	1.7 ± 0.6 2.2 ± 1.3									
	2007-08	1.8 ± 0.9	1.5 ± 0.3	1.6 ± 0.4	1.2 ± 0.3	1.7 ± 0.6	1.4 ± 0.4									
40-59	2003-04	$4.0 \pm 2.3$	$2.3 \pm 0.5$	2.6 ± 1.5	2.8 ± 1.2	2.0 ± 0.9	2.0 ± 0.9									
	2005-06	$1.6 \pm 0.5$	$2.1 \pm 0.3$	$2.1 \pm 1.7$	$1.5 \pm 0.9$	$1.4 \pm 0.6$	$1.2 \pm 0.4$					MA 个				
	2007-08	$1.8 \pm 0.5$	2.1 ± 0.5	$1.3 \pm 0.2$	1.3 ± 0.4	1.4 ± 0.5	2.0 ± 1.2									
≥60	2003-04	2.4 ± 0.3	2.6 ± 0.7	2.5 ± 1.1	3.2 ± 2.4	2.8 ± 0.8	3.3 ± 1.3									
	2005-06	3.3 ± 0.8	2.4 ± 0.3	1.8 ± 1.4	1.9 ± 1.3	2.6 ± 1.2	3.1 ± 0.9									
	2007-08	$2.3 \pm 0.3$	2.9 ± 1.8	2.3 ± 1.3	1.9 ± 0.7	2.5 ± 0.8	2.4 ± 0.8									
2 2' A A'-Tot	rabromodiphenyl (	ether (DRNF/17)	ı													
12-19	2003-04	48.6 ± 14.2	65.2 ± 15.4	35.2 ± 4.2	59.4 ± 29.0	38.9 ± 14.0	60.6 ± 21.5									
12-13	2005-06	50.7 ± 15.6	46.8 ± 9.5	74.9 ± 16.9	51.3 ± 12.0	62.5 ± 35.4	59.0 ± 40.0									
	2007-08	34.2 ± 22.4	53.1 ± 21.1	56.4 ± 36.7	31.0 ± 14.2	31.2 ± 8.7	32.9 ± 12.7									
	2007-08	34.Z ± ZZ.4	JJ.1 ± Z1.1	30.4 ± 30.7	31.0 1 14.2	31.2 ± 6.7	32.9 ± 12.7									
20-39	2003-04	39.6 ± 19.9	37.7 ± 10.2	53.5 ± 25.6	106.4 ± 145.5	40.7 ± 16.8	43.0 ± 28.1									
	2005-06	30.4 ± 8.9	41.2 ± 7.8	61.0 ± 44.8	42.8 ± 26.9	50.0 ± 37.3	46.1 ± 43.4									
	2007-08	31.2 ± 20.5	33.9 ± 11.3	32.2 ± 8.2	28.1 ± 10.1	32.2 ± 15.3	29.1 ± 12.3									
40-59	2003-04	40.9 ± 17.2	49.4 ± 27.8	57.8 ± 43.5	66.2 ± 32.2	38.7 ± 19.3	42.1 ± 23.5									
	2005-06	25.4 ± 8.5	36.4 ± 9.9	59.0 ± 72.7	29.6 ± 18.3	22.5 ± 11.5	21.2 ± 7.1									
	2007-08	23.0 ± 6.4	37.4 ± 18.7	20.9 ± 6.2	30.5 ± 13.1	20.5 ± 7.5	38.7 ± 25.4									
≥60	2003-04	44.8 ± 6.1	34.6 ± 9.8	62.6 ± 26.3	51.0 ± 30.8	45.7 ± 10.5	62.2 ± 38.5									
_00	2005-06	52.9 ± 12.7	36.8 ± 7.7	41.4 ± 16.2	65.8 ± 47.8	60.0 ± 34.4	67.3 ± 38.4									
	2003-00	37.8 ± 4.7	41.5 ± 15.1	46.4 ± 20.9	31.8 ± 8.9	40.4 ± 12.5	40.1 ± 19.5									

**Table S5.** Arithmetic mean concentration (ng/g lipid) of 2,2′,3,4,4′-pentabromodiphenyl ether (PBDE85) and 2,2′,4,4′,5-pentabromodiphenyl ether (PBDE99) in pooled serum samples from NHANES participants by age group, survey period, ethnicity, and sex with 95% confidence interval (95%CI). All pairwise comparisons between each ethnic group within each sex group and between each sex within ethnic group have been given. ↑ indicates significant higher concentration compared with comparison group (non-overlap of 95%CI).

		ī	Concentration	(ng/g lipid) wit	h 95%CI by ethr	nicity and gende	r		Which o	of two compa	asion group	s are highe	er. No differen	ce denote	d with ""	
Age Group	Survey Period		MA	N	НВ	NI	-IW	Overlap	of 95% CI f	for Females	Overla	of 95% CI	for Males	Overla	of 95% CI by	Gender
		Females	Males	Females	Males	Females	Males	MA/NHB	MA/NHW	NHB/NHW	MA/NHB	MA/NHW	NHB/NHW	MA	NHB	NHW
2,2',3,4,4'-T	entabromodiphen	yl ether (PBDE	:85)													
12-19	2003-04	1.4 ± 0.2	1.8 ± 0.3	1.2 ± 0.1	1.9 ± 0.8	1.3 ± 0.2	2.1 ± 0.7									
	2005-06	1.0 ± 0.2	0.9 ± 0.1	1.9 ± 0.5	1.1 ± 0.2	1.5 ± 0.8	1.6 ± 1.0	ΝНВ ↑								
	2007-08	$0.8 \pm 0.4$	$1.0 \pm 0.6$	1.6 ± 1.2	$0.8 \pm 0.4$	$0.8 \pm 0.4$	$0.6 \pm 0.2$									
20-39	2003-04	1.1 ± 0.3	1.1 ± 0.2	1.8 ± 0.7	3.4 ± 4.1	1.3 ± 0.5	1.4 ± 1.0									
20 33	2005-06	0.7 ± 0.2	0.8 ± 0.2	1.6 ± 1.4	1.1 ± 0.6	1.3 ± 0.9	1.0 ± 1.0									
	2007-08	$0.8 \pm 0.6$	$0.8 \pm 0.2$	$0.9 \pm 0.2$	0.7 ± 0.3	0.8 ± 0.5	$0.6 \pm 0.3$									
40-59	2003-04	1.9 ± 1.4	1.3 ± 0.9	2.1 ± 1.3	2.5 ± 1.4	1.3 ± 0.7	1.4 ± 0.7									
40-39	2005-04	0.5 ± 0.2	0.9 ± 0.5	2.1 ± 1.5 1.5 ± 2.0	0.5 ± 0.2	0.4 ± 0.2	0.4 ± 0.7									
	2007-08	0.5 ± 0.2 0.6 ± 0.3	0.9 ± 0.5 0.8 ± 0.5	0.5 ± 0.2	0.5 ± 0.2 0.8 ± 0.3	0.4 ± 0.2 0.5 ± 0.3	1.1 ± 0.7									
≥60	2003-04	1.2 ± 0.1	1.3 ± 0.4	1.6 ± 0.5	1.5 ± 0.5	1.2 ± 0.2	1.9 ± 1.0									
200	2005-04	1.2 ± 0.1 1.1 ± 0.3	0.7 ± 0.4	1.0 ± 0.5 1.1 ± 0.6	1.5 ± 0.5 1.5 ± 1.5	1.2 ± 0.2 1.7 ± 1.2	1.6 ± 0.9									
	2003-08	1.1 ± 0.3 1.0 ± 0.1	1.0 ± 0.8	1.1 ± 0.6 1.2 ± 0.5	0.8 ± 0.4	0.8 ± 0.3	1.0 ± 0.9 1.0 ± 0.5									
2,2',4,4',5-P	entabromodiphen	yl ether (PBDE	:99)													
12-19	2003-04	11.3 ± 2.5	16.1 ± 4.2	9.8 ± 1.5	15.7 ± 6.7	10.8 ± 5.5	14.1 ± 4.8									
	2005-06	10.7 ± 2.9	9.3 ± 1.7	$23.3 \pm 5.8$	$12.6 \pm 3.0$	17.5 ± 12.0	14.6 ± 10.0	NHB ↑							Females ↑	
	2007-08	7.0 ± 2.6	10.7 ± 5.6	17.6 ± 12.8	7.4 ± 4.7	8.1 ± 5.6	$6.8 \pm 2.9$									
20-39	2003-04	8.2 ± 3.2	9.2 ± 2.4	16.5 ± 11.2	32.2 ± 45.3	11.0 ± 5.8	15.6 ± 16.9									
	2005-06	6.5 ± 1.6	8.5 ± 1.8	17.5 ± 16.0	16.5 ± 19.3	13.4 ± 11.0	10.3 ± 10.1									
	2007-08	$6.4 \pm 5.1$	7.8 ± 3.0	7.2 ± 2.3	$6.3 \pm 2.6$	7.7 ± 4.5	5.4 ± 2.1									
40-59	2003-04	8.9 ± 3.0	19.0 ± 26.8	15.6 ± 12.4	23.9 ± 14.7	9.4 ± 5.1	11.9 ± 6.8									
	2005-06	6.3 ± 4.7	9.1 ± 3.3	16.1 ± 24.7	5.7 ± 2.9	4.2 ± 2.0	4.4 ± 1.9									
	2007-08	4.5 ± 1.3	6.9 ± 4.7	4.3 ± 1.6	7.2 ± 3.6	4.4 ± 2.0	9.9 ± 7.6									
≥60	2003-04	10.7 ± 2.3	7.3 ± 2.3	15.3 ± 8.2	12.7 ± 6.5	9.4 ± 2.0	15.9 ± 11.6									
	2005-06	13.0 ± 5.4	7.5 ± 2.9	11.2 ± 7.3	19.5 ± 22.8	12.3 ± 6.9	15.4 ± 12.1									
	2007-08	9.2 ± 1.7	8.4 ± 3.2	11.3 ± 8.3	8.3 ± 3.3	8.0 ± 2.8	9.8 ± 5.9									

**Table S6.** Arithmetic mean concentration (ng/g lipid) of 2,2′,4,4′,6-pentabromodiphenyl ether (PBDE100) and 2,2′,4,4′,5,5′-hexabromodiphenyl ether (PBDE153) in pooled serum samples from NHANES participants by age group, survey period, ethnicity, and sex with 95% confidence interval (95%CI). All pairwise comparisons between each ethnic group within each sex group and between each sex within ethnic group have been given. ↑ indicates significant higher concentration compared with comparison group (non-overlap of 95%CI).

			Concentration	(ng/g lipid) with	95%CI by ethni	icity and gende	r		Which of	two compar	asion groups	s are highe	r. No differen	ce denote	d with ""	
Age Group	Survey Period		MA	N	НВ	N	HW	Overla	of 95% CI fo	or Females	Overlap	of 95% C	for Males	Overla	of 95% CI b	y Gender
		Females	Males	Females	Males	Females	Males	MA/NHE	MA/NHW	NHB/NHW	MA/NHB	MA/NHW	NHB/NHW	MA	NHB	NHW
2,2',4,4',6-P	entabromodiphen	yl ether (PBDE	E100)													
12-19	2003-04	8.5 ± 2.1	13.1 ± 3.9	6.4 ± 1.0	13.0 ± 7.2	7.0 ± 2.3	13.4 ± 7.2									
	2005-06	9.5 ± 3.0	8.9 ± 2.1	14.2 ± 5.0	10.8 ± 2.3	10.8 ± 4.9	13.1 ± 11.2									
	2007-08	6.4 ± 3.7	11.0 ± 5.8	10.2 ± 8.3	6.5 ± 2.5	6.0 ± 1.9	5.7 ± 2.7									
20-39	2003-04	6.5 ± 3.0	6.1 ± 1.7	8.6 ± 4.0	17.4 ± 20.7	10.1 ± 4.0	8.9 ± 4.9									
20 33	2005-06	5.4 ± 1.9	8.9 ± 3.0	11.7 ± 11.6	9.1 ± 7.2	9.9 ± 5.7	9.0 ± 8.1									
	2003-08	7.5 ± 4.7	7.7 ± 3.0	7.4 ± 2.9	7.2 ± 3.2	6.1 ± 2.1	7.7 ± 3.3									
						*	=									
40-59	2003-04	8.5 ± 3.5	8.2 ± 4.6	12.0 ± 10.5	15.2 ± 8.1	8.6 ± 5.6	8.9 ± 5.7									
	2005-06	$6.0 \pm 2.2$	$7.9 \pm 3.6$	10.4 ± 13.2	7.2 ± 4.9	4.1 ± 1.9	4.1 ± 1.6									
	2007-08	4.9 ± 1.5	8.2 ± 4.6	4.4 ± 1.2	7.4 ± 2.2	4.1 ± 1.5	$9.0 \pm 5.4$									
≥60	2003-04	8.3 ± 1.1	9.2 ± 3.1	10.4 ± 3.6	8.6 ± 3.9	9.9 ± 2.2	13.8 ± 8.3									
	2005-06	10.2 ± 2.7	6.7 ± 2.6	8.0 ± 4.0	12.1 ± 6.6	12.8 ± 7.0	14.2 ± 7.6									
	2007-08	7.9 ± 1.1	9.5 ± 7.4	8.5 ± 3.4	$6.6 \pm 2.0$	8.1 ± 2.2	$7.8 \pm 4.0$									
22'44'55	'-Hexabromodiphe	onul other (DRI	DF153)													
12-19	2003-04	8.8 ± 1.6	17.5 ± 9.6	9.7 ± 2.3	24.2 ± 7.7	11.1 ± 4.9	22.8 ± 17.0								Males ↑	
12 13	2005-06	10.5 ± 3.1	11.0 ± 3.5	12.1 ± 3.1	16.5 ± 2.4	12.8 ± 6.0	18.0 ± 12.2									
	2007-08	7.1 ± 2.1	17.2 ± 19.5	11.1 ± 5.2	20.7 ± 7.2	8.8 ± 2.7	13.8 ± 7.3									
20-39	2003-04	6.0 ± 2.4	9.8 ± 5.9	8.4 ± 3.4	16.2 ± 11.6	17.5 ± 6.2	19.1 ± 7.8		NHW ↑							
	2005-06	6.7 ± 3.8	11.9 ± 7.1	9.6 ± 4.3	10.3 ± 5.6	11.1 ± 4.0	15.4 ± 8.0									
	2007-08	11.1 ± 6.2	10.7 ± 5.7	11.0 ± 4.1	13.4 ± 9.8	11.8 ± 3.6	20.9 ± 6.6									
40-59	2003-04	8.1 ± 3.6	9.2 ± 5.9	8.9 ± 5.8	22.2 ± 11.4	9.3 ± 4.3	24.4 ± 21.6									
	2005-06	$9.2 \pm 4.0$	11.3 ± 11.2	$7.4 \pm 5.4$	13.4 ± 9.1	10.4 ± 5.8	7.5 ± 2.6									
	2007-08	$6.5 \pm 3.0$	11.9 ± 5.7	$6.3 \pm 2.4$	10.2 ± 2.5	9.9 ± 4.4	16.0 ± 7.5									
≥60	2003-04	9.1 ± 2.5	12.7 ± 4.6	8.0 ± 2.5	8.6 ± 3.6	15.6 ± 5.4	25.4 ± 9.9						NHW ↑			
	2005-06	11.0 ± 4.3	8.0 ± 3.8	6.9 ± 4.8	14.7 ± 4.1	9.6 ± 5.3	19.7 ± 9.1									
	2007-08	10.2 ± 5.7	17.6 ± 10.3	7.9 ± 3.5			14.7 ± 7.2									

**Table S7.** Arithmetic mean concentration (ng/g lipid) of 2,4,4′,5-tetrachlorobiphenyl (PCB74) and 2,2′,4,4′,5-pentachlorobiphenyl (PCB99) in pooled serum samples from NHANES participants by age group, survey period, ethnicity, and sex with 95% confidence interval (95%CI). All pairwise comparisons between each ethnic group within each sex group and between each sex within ethnic group have been given. ↑ indicates significant higher concentration compared with comparison group (non-overlap of 95%CI).

		c	oncentration	(ng/g lipid) wit	h 95%CI by eth	nicity and gend	er		Which o	f two compa	rasion group	s are highe	r. No differe	nce denoted	with "'	
Age Group	Survey Period	М	Α	N	НВ	NI	HW	Overlap	of 95% CI f	or Females	Overla	of 95% CI1	for Males	Overlap	of 95% CI	by Gender
		Females	Males	Females	Males	Females	Males	MA/NHB	MA/NHW	NHB/NHW	MA/NHB	MA/NHW	NHB/NHW	MA	NHB	NHW
2 / // 5 Tota	achlorobiphenyl (	DCR74)														
12-19	2003-04	2.0 ± 0.4	1.9 ± 0.2	2.2 ± 0.4	2.9 ± 0.3	2.6 ± 0.6	2.6 ± 0.4				ΝНВ ↑	NHW ↑			Males 1	
12 13	2005-06	1.1 ± 0.3	1.2 ± 0.3	1.3 ± 0.6	2.0 ± 0.3	1.8 ± 0.4	1.8 ± 0.4		NHW ↑		NHB ↑					
	2007-08	0.8 ± 0.3	1.0 ± 0.3	1.0 ± 0.6	1.4 ± 0.5	1.7 ± 0.3	1.7 ± 0.8		NHW ↑							
20-39	2003-04	$2.3 \pm 0.4$	1.9 ± 0.3	$3.8 \pm 0.8$	2.6 ± 0.4	$3.9 \pm 0.6$	$3.1 \pm 0.3$	NHB 个	NHW ↑			NHW ↑			Females	↑
	2005-06	1.5 ± 0.5	1.6 ± 0.2	2.9 ± 0.9	2.3 ± 0.8	2.6 ± 0.5	2.6 ± 0.9	NHB 个	NHW ↑							
	2007-08	1.6 ± 0.4	1.6 ± 0.3	1.8 ± 0.4	1.8 ± 0.4	2.4 ± 0.8	2.2 ± 0.2					NHW ↑				
40-59	2003-04	6.4 ± 3.5	4.3 ± 0.9	11.2 ± 1.6	7.3 ± 4.2	8.0 ± 0.7	6.6 ± 1.2			ΝНВ ↑		NHW ↑				
	2005-06	4.3 ± 0.9	2.9 ± 0.8	8.7 ± 1.9	4.5 ± 2.2	7.2 ± 0.9	5.3 ± 0.9	NHB ↑	NHW ↑			NHW ↑			Females	↑Females ↑
	2007-08	4.7 ± 1.8	3.1 ± 0.6	8.0 ± 2.3	4.4 ± 2.6	6.3 ± 0.8	4.1 ± 0.6									Females ↑
≥60	2003-04	13.9 ± 2.8	6.2 ± 1.5	38.3 ± 9.1	26.2 ± 11.0	20.0 ± 3.2	12.2 ± 1.5	инв ↑	NHW ↑	ΝНВ ↑	ΝНВ ↑	NHW ↑	ΝНВ ↑	Females ↑		Females 个
200	2005-06	11.9 ± 5.4	6.4 ± 1.9	36.0 ± 21.6	16.5 ± 6.5	17.8 ± 3.5	11.7 ± 2.5				NHB ↑	NHW ↑				Females ↑
	2007-08	9.7 ± 3.8	6.5 ± 2.0	21.5 ± 4.3	10.5 ± 0.5			ΝНВ ↑	NHW ↑			NHW ↑				↑Females ↑
	2007 00	J.7 ± J.0	0.5 ± 2.0	21.5 ± 4.5	11.5 1 5.2	15.0 ± 2.2	10.5 1 1.0	IVIID	INITIV			INIIVV			remares	Temares
2,2',4,4',5-P	entachlorobiphen	yl (PCB99)														
12-19	2003-04	$2.0 \pm 0.4$	2.1 ± 0.2	2.7 ± 0.6	3.4 ± 0.4	2.9 ± 0.6	$2.8 \pm 0.8$				NHB ↑					
	2005-06	$0.8 \pm 0.1$	0.9 ± 0.2	1.4 ± 0.3	2.1 ± 0.5	$1.3 \pm 0.2$	1.5 ± 0.7	NHB ↑	NHW ↑		NHB ↑					
	2007-08	$0.7 \pm 0.2$	$0.8 \pm 0.3$	1.2 ± 0.7	1.4 ± 0.3	$0.9 \pm 0.6$	1.5 ± 0.7									
20-39	2003-04	2.1 ± 0.4	2.3 ± 0.4	4.9 ± 1.4	3.9 ± 0.9	3.5 ± 0.8	3.6 ± 0.5	ΝНВ ↑	NHW ↑		NHB ↑	NHW ↑				
	2005-06	1.1 ± 0.4	1.5 ± 0.3	2.4 ± 0.7	2.5 ± 0.6	1.9 ± 0.4	2.6 ± 0.8	NHB ↑			NHB ↑	NHW ↑				
	2007-08	1.3 ± 0.2	1.5 ± 0.4	1.9 ± 0.7	2.2 ± 0.5	2.1 ± 1.2	2.3 ± 0.4					NHW ↑				
40-59	2003-04	5.4 ± 3.9	$3.8 \pm 0.7$	10.7 ± 2.1	8.7 ± 3.1	6.4 ± 1.1	6.7 ± 1.7			NHB ↑	NHB ↑	NHW ↑				
	2005-06	$3.3 \pm 0.8$	2.4 ± 0.5	7.6 ± 1.8	5.5 ± 2.2	4.5 ± 0.7	4.3 ± 0.9	NHB ↑		NHB ↑	NHB ↑	NHW ↑				
	2007-08	2.7 ± 0.6	3.2 ± 1.3	6.4 ± 1.7	6.2 ± 3.2	3.9 ± 0.6	3.8 ± 0.7	NHB ↑		NHB ↑						
≥60	2003-04	7.0 ± 0.8	5.0 ± 0.9	31.5 ± 7.4	25.2 ± 13.4	12.7 ± 4.6	8.5 ± 1.8	ΝНВ ↑	NHW ↑	ΝНВ ↑	ΝНВ ↑	NHW ↑	ΝНВ ↑	Females ↑		
	2005-06	5.7 ± 1.8	4.2 ± 0.8	21.5 ± 13.3	14.2 ± 5.7	10.0 ± 1.9	8.0 ± 1.6	NHB ↑	NHW ↑		NHB ↑	NHW ↑				
	2007-08	5.2 ± 1.6	4.5 ± 1.0	17.9 ± 6.0	11.5 ± 3.1	8.8 ± 1.7	8.5 ± 2.3	NHB ↑	NHW ↑	ΝНВ ↑	NHB ↑	NHW ↑				

**Table S8.** Arithmetic mean concentration (ng/g lipid) of 2,3',4,4',5-pentachlorobiphenyl (PCB118) and 2,2',3,4,4',5- and 2,3,3',4,4',6-hexachlorobiphenyl (PCB138-158) in pooled serum samples from NHANES participants by age group, survey period, ethnicity, and sex with 95% confidence interval (95%CI). All pairwise comparisons between each ethnic group within each sex group and between each sex within ethnic group have been given. ↑ indicates significant higher concentration compared with comparison group (non-overlap of 95%CI).

			Concentration	(ng/g lipid) with	95%CI by ethnici	ty and gender			Which of	two compa	rasion group	s are highe	r. No differe	nce denoted	with ""	
Age Group	Survey Period	M	Α	NI	НВ	NI	-tw	Overlap	of 95% CI fo	or Females	Overla	of 95% CI	for Males	Overlap	of 95% CI	by Gender
		Females	Males	Females	Males	Females	Males	MA/NHB	MA/NHW	NHB/NHW	MA/NHB	MA/NHW	NHB/NHW	MA	NHB	NHW
2 2' 1 1' 5 0	entachlorobiphen	ul (DCB110)														
12-19	2003-04	2.7 ± 0.5	2.6 ± 0.3	3.6 ± 1.0	3.9 ± 0.5	4.0 ± 1.1	3.6 ± 0.9				ΝНВ ↑					
12 13	2005-06	1.4 ± 0.2	1.5 ± 0.2	2.0 ± 0.4	2.5 ± 0.5	2.1 ± 0.4	2.2 ± 1.1	ΝНВ ↑	NHW ↑		NHB ↑					
	2007-08	1.2 ± 1.1	1.5 ± 0.4	1.9 ± 1.0	2.0 ± 0.5	2.4 ± 0.7	2.3 ± 1.3									
20-39	2003-04	3.3 ± 0.6	3.0 ± 0.6	5.9 ± 1.5	4.2 ± 1.4	5.2 ± 1.1	4.8 ± 1.1	NHB ↑	NHW ↑			NHW ↑				
20 33	2005-06	1.9 ± 0.6	2.2 ± 0.4	3.7 ± 1.4	2.6 ± 1.5	3.0 ± 0.6	3.3 ± 1.5									
	2007-08	2.5 ± 0.5	2.7 ± 0.6	3.4 ± 0.9	2.8 ± 1.1	4.2 ± 2.0	3.3 ± 0.5									
40-59	2003-04	11.7 ± 9.3	6.7 ± 1.3	15.6 ± 2.4	14.1 ± 12.3	9.9 ± 2.3	8.6 ± 2.3			ΝНВ ↑						
.0 55	2005-06	6.8 ± 1.6	4.1 ± 0.8	11.7 ± 1.9	7.3 ± 6.9	7.8 ± 2.1	7.6 ± 2.8	ΝНВ ↑						Females ↑		
	2007-08	6.1 ± 2.0	6.0 ± 1.7	11.2 ± 2.8	7.3 ± 4.7	7.6 ± 1.9	5.2 ± 0.4	NHB ↑								Females ↑
≥60	2003-04	17.8 ± 2.0	9.0 ± 3.4	56.4 ± 15.1	32.5 ± 15.2	26.6 ± 6.9	14.7 ± 2.9	инв ↑		ΝНВ ↑	ΝНВ ↑			Females ↑		Females 个
	2005-06	15.3 ± 6.7	8.1 ± 2.7	45.0 ± 28.0	19.9 ± 10.6	21.9 ± 4.4	13.3 ± 3.4									Females ↑
	2007-08	14.0 ± 3.9	8.7 ± 1.9	35.1 ± 9.1	16.1 ± 4.3	21.5 ± 6.0	15.5 ± 3.6	ΝНВ ↑			ΝНВ ↑	NHW ↑			Females '	<b>↑</b>
2,2',3,4,4',5	'- and 2,3,3',4,4',6	-Hexachlorobipl	henyl (PCB138-	-158)												
12-19	2003-04	3.8 ± 0.5	4.6 ± 0.8	6.2 ± 1.3	7.7 ± 1.1	6.3 ± 1.6	6.5 ± 1.7	ΝНВ ↑	NHW ↑		ΝНВ ↑					
	2005-06	1.9 ± 0.4	2.7 ± 1.0	3.0 ± 0.5	4.8 ± 1.2	3.2 ± 0.8	4.1 ± 2.0	NHB ↑	NHW ↑						Males ↑	
	2007-08	1.8 ± 1.5	2.6 ± 1.8	3.3 ± 1.6	4.6 ± 1.5	3.5 ± 2.0	4.8 ± 3.0									
20-39	2003-04	5.6 ± 1.2	7.1 ± 1.8	12.5 ± 3.5	12.4 ± 4.8	11.4 ± 3.1	13.5 ± 2.8	ΝНВ ↑	NHW ↑			NHW ↑				
	2005-06	3.2 ± 1.1	4.5 ± 0.8	6.9 ± 2.5	7.7 ± 3.4	5.2 ± 0.9	8.0 ± 2.9	NHB ↑								
	2007-08	4.4 ± 0.6	5.7 ± 1.5	7.2 ± 2.5	7.9 ± 2.3	7.9 ± 4.4	8.7 ± 1.6									
40-59	2003-04	20.2 ± 10.4	18.6 ± 4.2	42.9 ± 9.7	41.3 ± 17.8	25.8 ± 3.3	28.4 ± 7.0	NHB 个		ΝНВ ↑	ΝНВ ↑					
	2005-06	12.5 ± 2.3	9.7 ± 1.6	25.5 ± 6.4	20.9 ± 8.4	16.5 ± 2.5	19.6 ± 6.9	NHB ↑		NHB ↑	NHB ↑	NHW ↑				
	2007-08	14.6 ± 4.2	15.2 ± 4.5	28.2 ± 7.0	28.6 ± 14.5	21.5 ± 2.4	20.7 ± 4.3	ΝНВ ↑	NHW ↑							
≥60	2003-04	30.9 ± 7.6	26.6 ± 4.2	115.4 ± 24.7	108.0 ± 42.3	48.6 ± 7.6	46.1 ± 9.2	ΝНВ ↑	NHW ↑	ΝНВ ↑	ΝНВ ↑	NHW ↑	ΝНВ ↑			
	2005-06	21.7 ± 11.9	19.6 ± 7.2	81.1 ± 58.7	56.5 ± 23.9	33.5 ± 6.1	32.6 ± 3.5				NHB ↑	NHW ↑				
	2007-08	25.6 ± 13.1	23.9 ± 6.9	79.9 ± 15.5	68.2 ± 21.6	45.0 ± 6.4	47.5 ± 9.1	NHB ↑		NHB ↑	NHB ↑	NHW ↑				

**Table S9.** Arithmetic mean concentration (ng/g lipid) of 2,2′,4,4′,5,5′-hexachlorobiphenyl (PCB153) and 2,2′,3,4,4′,5,5′-heptachlorobiphenyl (PCB180) in pooled serum samples from NHANES participants by age group, survey period, ethnicity, and sex with 95% confidence interval (95%CI). All pairwise comparisons between each ethnic group within each sex group and between each sex within ethnic group have been given. ↑ indicates significant higher concentration compared with comparison group (non-overlap of 95%CI).

			Concentratio	n (ng/g lipid) wit	h 95%CI by ethnic	ity and gender			Which of	f two compar	asion grou	ps are highe	r. No differen	ce denote	d with ""	
Age Group	Survey Period	N	ΛA	N	НВ	NH	IW	Overlap	of 95% CI f	or Females	Overla	p of 95% CI	for Males	Overla	of 95% CI by	Gender
		Females	Males	Females	Males	Females	Males	MA/NHB	MA/NHW	NHB/NHW	MA/NHB	MA/NHW	NHB/NHW	MA	NHB	NHW
2,2′,4,4′,5,5	'-Hexachlorobiphe	nyl (PCB153)														
12-19	2003-04	4.4 ± 0.5	5.7 ± 1.1	7.2 ± 1.5	9.7 ± 1.5	7.4 ± 2.3	8.6 ± 2.1	ΝНВ ↑	NHW ↑		ΝНВ ↑					
	2005-06	2.8 ± 0.4	3.7 ± 1.1	4.2 ± 0.8	7.4 ± 1.8	4.6 ± 1.3	6.3 ± 2.7	NHB ↑	NHW ↑		NHB ↑				Males ↑	
	2007-08	2.9 ± 3.3	3.3 ± 2.0	3.8 ± 1.8	5.7 ± 1.8	4.3 ± 2.9	5.8 ± 2.8									
20-39	2003-04	6.6 ± 1.4	8.9 ± 2.0	15.3 ± 4.4	16.7 ± 7.3	14.4 ± 3.8	17.6 ± 3.9	инв ↑	NHW ↑			NHW ↑				
20 33	2005-06	4.7 ± 1.9	6.9 ± 0.9	10.8 ± 4.1	13.8 ± 6.6	8.5 ± 1.9	13.2 ± 5.4	NHB ↑				NHW ↑				
	2007-08	5.6 ± 1.2	6.8 ± 1.7	9.0 ± 3.2	10.3 ± 2.9	9.4 ± 4.6	11.0 ± 2.1					NHW ↑				
40-59	2003-04	23.7 ± 10.5	26.5 ± 7.3	53.2 ± 11.9	59.9 ± 27.2	34.2 ± 3.5	38.2 ± 9.4	NHB ↑		ΝНВ ↑						
10 33	2005-06	19.1 ± 3.3	16.5 ± 2.6	41.2 ± 10.1	38.8 ± 15.3	27.8 ± 2.5	36.4 ± 16.4	NHB ↑	NHW ↑	NHB ↑	ΝНВ ↑	NHW ↑				
	2007-08	20.9 ± 6.0	22.4 ± 6.1	35.7 ± 8.0	41.0 ± 18.6	27.7 ± 2.3	28.2 ± 4.8	NHB ↑								
≥60	2003-04	39.5 ± 11.4	36.7 ± 5.5	146.5 ± 27.7	153.0 ± 53.6	62.1 ± 7.8	65.0 ± 11.0	NHB ↑	NHW ↑	ΝНВ ↑	NHB ↑	NHW ↑	ΝНВ ↑			
	2005-06	36.2 ± 9.3	37.3 ± 16.8	129.5 ± 74.8	103.5 ± 40.9	58.0 ± 10.8	60.4 ± 6.2	NHB ↑	NHW ↑		NHB ↑					
	2007-08	40.9 ± 32.1		102.4 ± 15.6	94.5 ± 29.3	56.4 ± 7.8	63.9 ± 10.6	NHB ↑		NHB ↑	NHB ↑	NHW ↑				
2.2'.3.4.4'.5	.5'-Heptachlorobig	ohenvi (PCB180	)													
12-19	2003-04	2.7 ± 0.6	3.6 ± 1.1	4.0 ± 0.7	5.5 ± 1.3	4.5 ± 1.7	6.3 ± 1.8									
	2005-06	1.8 ± 0.4	2.0 ± 0.8	2.1 ± 0.3	4.1 ± 1.3	2.7 ± 0.6	4.2 ± 1.4								Males ↑	
	2007-08	2.1 ± 3.9	2.2 ± 1.2	2.0 ± 0.7	3.5 ± 1.8	2.8 ± 2.1	3.5 ± 1.4									
20-39	2003-04	4.6 ± 1.3	7.3 ± 2.4	8.8 ± 2.9	12.9 ± 6.2	10.4 ± 2.8	17.7 ± 10.3	инв ↑	NHW ↑							
	2005-06	3.4 ± 1.9	5.1 ± 0.7	6.9 ± 3.2	10.5 ± 4.1	6.4 ± 2.2	10.7 ± 6.1				NHB ↑					
	2007-08	3.9 ± 0.7	5.5 ± 1.6	5.7 ± 2.6	7.4 ± 2.6	6.7 ± 2.8	8.4 ± 1.4									
40-59	2003-04	16.7 ± 4.1	28.0 ± 11.3	36.6 ± 10.2	50.0 ± 18.6	28.8 ± 3.6	33.4 ± 7.2	NHB ↑	NHW ↑							
	2005-06	15.5 ± 2.7	15.9 ± 4.2	30.5 ± 10.1	32.8 ± 8.0	22.4 ± 2.5	37.8 ± 24.9	NHB ↑	NHW ↑		NHB ↑					
	2007-08	18.2 ± 5.1	20.9 ± 6.6	26.4 ± 7.9	34.2 ± 12.7	22.3 ± 2.2	25.8 ± 3.7									
≥60	2003-04	33.7 ± 12.6	39.6 ± 8.4	94.5 ± 19.8	128.6 ± 41.3	50.9 ± 4.6	62.9 ± 10.0	NHB ↑	NHW ↑	ΝНВ ↑	NHB ↑	NHW ↑	ΝНВ ↑			
	2005-06	30.9 ± 2.1	39.3 ± 38.4	88.6 ± 47.8	88.0 ± 29.7	48.3 ± 7.9	58.6 ± 9.3	NHB ↑	NHW ↑							
	2007-08	33.7 ± 29.8	42.0 ± 18.3	73.1 ± 10.2	82.5 ± 29.2	45.7 ± 4.6	57.6 ± 9.0			ΝНВ ↑						

**Table S10.** Arithmetic mean concentration (ng/g lipid) of 2,2′,3,3′,4,4′,5,5′-octachlorobiphenyl (PCB194) in pooled serum samples from NHANES participants by age group, survey period, ethnicity, and sex with 95% confidence interval (95%CI). All pairwise comparisons between each ethnic group within each sex group and between each sex within ethnic group have been given. ↑ indicates significant higher concentration compared with comparison group (non-overlap of 95%CI).

			Concentration (r	ng/g lipid) with	95%CI by ethi	nicity and gend	ler		Which o	of two compa	rasion group	s are high	er. No differen	ce denoted	l with ""	
Age Group	<b>Survey Period</b>		MA	N	НВ	NI	IW	Overlap	of 95% CI	for Females	Overla	p of 95% C	for Males	Overlap	of 95% CI	by Gender
		Females	Males	Females	Males	Females	Males	MA/NHB	MA/NHW	/ NHB/NHW	MA/NHB	MA/NHW	NHB/NHW	MA	NHB	NHW
2,2',3,3',4,4	,5,5'-Octachlorob	phenyl (PCB1	194)													
12-19	2003-04	0.4 ± 0.3	0.5 ± 0.2	$0.9 \pm 0.7$	1.0 ± 0.3	$0.8 \pm 0.4$	1.4 ± 0.5					NHW ↑				
	2005-06	0.3 ± 0.1	0.5 ± 0.3	$0.4 \pm 0.1$	$0.6 \pm 0.2$	$0.4 \pm 0.1$	$0.6 \pm 0.2$									
	2007-08	0.4 ± 0.5	0.5 ± 0.2	$0.4 \pm 0.3$	$0.6 \pm 0.5$	$0.7 \pm 0.4$	$0.6 \pm 0.2$									
20-39	2003-04	$0.9 \pm 0.5$	1.5 ± 0.7	1.5 ± 0.5	2.7 ± 1.3	2.1 ± 0.6	3.7 ± 1.9		NHW ↑							
	2005-06	$0.6 \pm 0.3$	1.0 ± 0.2	$1.3 \pm 0.6$	2.2 ± 0.9	$1.3 \pm 0.4$	2.3 ± 1.5				NHB ↑					
	2007-08	$0.9 \pm 0.2$	1.8 ± 1.5	1.1 ± 0.8	1.8 ± 0.6	1.6 ± 0.4	1.9 ± 0.5		NHW ↑							
40-59	2003-04	3.4 ± 0.9	7.4 ± 3.3	7.1 ± 1.9	11.0 ± 3.4	6.2 ± 0.7	8.2 ± 1.6	инв ↑	NHW ↑							
	2005-06	3.2 ± 0.9	3.8 ± 1.1	6.3 ± 2.8	8.5 ± 1.4	4.3 ± 1.1	8.6 ± 3.3				ΝНВ ↑	NHW ↑				
	2007-08	3.7 ± 2.0	5.3 ± 1.7	6.0 ± 2.2	9.0 ± 2.8	5.4 ± 0.7	7.2 ± 1.0					'				Males ↑
≥60	2003-04	7.4 ± 2.8	9.9 ± 2.7	17.7 ± 3.4	27.2 ± 7.4	11.9 ± 1.4	16.5 ± 4.5	ΝНВ ↑	NHW ↑	NHB ↑	NHB ↑					
	2005-06	6.7 ± 1.7	9.5 ± 11.0	18.1 ± 9.4	21.6 ± 6.5	11.3 ± 2.0	15.1 ± 3.1	NHB ↑	NHW ↑							
	2007-08	7.8 ± 6.7	12.2 ± 6.4	16.9 ± 2.6	20.8 ± 5.3	11.7 ± 1.3	15.5 ± 2.4			NHB ↑						Males ↑

**Table S11.** Arithmetic mean concentration (ng/g lipid) of hexachlorobenzene (HCB) and 2,2-bis(4-chlorophenyl)-1,1-dichloroethene (p,p'-DDE) in pooled serum samples from NHANES participants by age group, survey period, ethnicity, and sex with 95% confidence interval (95%CI). All pairwise comparisons between each ethnic group within each sex group and between each sex within ethnic group have been given. ↑ indicates significant higher concentration compared with comparison group (non-overlap of 95%CI).

Age Group	Survey Period		Concentration (ng/g lipid) with 95%CI by ethnicity and gender												Which of two comparasion groups are higher. No difference denoted with ""								
		MA					NHB				NHW			Overlap of 95% CI for Females			Overlap of 95% CI for Males			Overlap	Overlap of 95% CI by Gender		
		Fema	les	Mal	es	Femal	es	Male	es	Fema	les	Mal	es	MA/NHB	MA/NHW	NHB/NHW	MA/NHB	MA/NHW	NHB/NHW	MA	NHB	NHW	
Hevachlorol	enzene (HCB)																						
12-19	2003-04	15.7 ±	2.6	16.8	1.8	12.6	0.9	15.8	2.7	13.1	1.8	15.3	1.9										
12 13	2005-06	5.9 ±	1.5	6.3	1.0	4.4	0.5	6.4	0.9	5.4	1.0	7.6	3.3								Males ↑		
	2007-08	6.8 ±	1.6	9.5	1.8	7.2	1.4	9.7	2.4	7.1	0.7	12.4	2.4									Males ↑	
	2007 00	0.0 ±	1.0	5.5	1.0	7.2	1.7	3.7	2	7.1	0.7	12.7	2.7									Widics	
20-39	2003-04	19.6 ±	7.3	14.9	2.2	12.9	0.9	13.4	1.5	14.1	1.0	14.2	1.8										
	2005-06	9.8 ±	2.5	9.6	5.5	5.9	1.4	5.8	1.0	7.1	0.8	7.3	1.1	МА ↑									
	2007-08	10.4 ±	2.3	9.5	1.8	7.0	0.6	9.1	1.6	7.9	0.6	9.5	1.2	ма 🛧									
40-59	2003-04	23.6 ±	7.0	20.9	4.4	16.4	1.7	16.2	2.6	17.9	1.7	16.3	2.6										
	2005-06	15.9 ±	3.3	14.0	4.7	9.2	1.4	7.2	1.1	9.3	0.8	8.8	1.0	МА ↑	МА ↑		МА↑						
	2007-08	20.6 ±	6.1	20.6	16.5	9.9	1.8	9.6	1.0	10.8	1.1	10.1	0.8	МА ↑	МА ↑								
≥60	2003-04	23.5 ±	2.7	18.9	1.3	25.3	2.2	18.1	2.3	21.4	2.1	18.4	1.4							Females ↑	Females ↑		
	2005-06	19.6 ±	10.3	10.5	3.2	18.1	3.4	10.9	4.7	13.9	2.1	11.1	1.0										
	2007-08	20.7 ±	4.8	12.1	1.8	15.1	1.9	10.3	1.4	15.1	1.9	11.8	1.1							Females ↑	Females ↑	Females 1	
2.2-Bis(4-chi	lorophenyl)-1,1-di	chloroethen	e (p.p'-D	DE)																			
12-19	2003-04	539.2 ±		570.8 ±	354.4	89.9 ±	18.6	143.4 ±	20.6	113.5 ±	42.1	196.9 ±	115.7				МА↑				Males ↑		
	2005-06	463.7 ±	266.1	2454.7 ±	3191.0	81.8 ±	12.5	141.0 ±	28.0	83.6 ±	20.5	112.9 ±	48.2	ма 🛧	ма 🛧						Males ↑		
	2007-08	164.2 ±	100.9	265.2 ±	111.4	63.6 ±	28.0	91.5 ±	13.5	70.2 ±	49.0	86.7 ±	21.2				МА↑	МА↑					
20-39	2003-04	924.4 ±	856.9	678.8 ±	615.5	160.5 ±	37.1	256.0 ±	155.9	138.6 ±	32.0	170.1 ±	55.4										
	2005-06	894.9 ±	619.4	1728.8 ±	1119.0	236.9 ±	259.4	235.6 ±	132.4	101.5 ±	25.0	399.1 ±	1044.4		МА ↑		МА↑						
	2007-08	653.1 ±	800.6	1087.7 ±	551.9	105.0 ±	30.1	123.1 ±	27.5	91.8 ±	21.8	112.9 ±	39.8				МА↑	МА↑					
40-59	2003-04	927.4 ±	287.4	2268.6 ±	1359.2	1246.0 ±	677.6	578.6 ±	228.6	411.9 ±	153.7	418.1 ±	236.1		ма ↑	ΝНВ ↑	МА↑	ма ↑					
	2005-06	1315.4 ±	379.2	2159.1 ±	2503.8	690.7 ±	400.2	453.6 ±	201.5	275.5 ±	133.3	220.1 ±	68.5		МА ↑								
	2007-08	1077.0 ±	415.4	1005.1 ±	356.7	495.3 ±	244.4	332.5 ±	53.2	178.7 ±	43.0	175.5 ±	51.1		ма 🛧	NHB ↑	МА↑	МА↑	NHB ↑				
≥60	2003-04	3146.6 ±	798.9	1888.3 ±	344.6	2038.7 ±	669.3	1457.7 ±	628.7	871.7 ±	285.8	715.9 ±	232.8		ма ↑	ΝНВ ↑		ма ↑		Females ↑			
	2005-06	1551.1 ±	517.2	1183.4 ±	749.5	2113.9 ±	980.2	1905.9 ±	1213.6	736.1 ±	257.2	696.0 ±	199.2		МА ↑	NHB ↑							
	2007-08	2961.5 ±	3213.4	1158.5 ±	369.6	2390.0 ±	768.4	854.0 ±	203.7	521.2 ±	165.3	502.5 ±	165.2			NHB ↑		МА ↑			Females ↑		