

## Supplementary Data

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# White Matter Hyperintensities, Systemic Inflammation, Brain Growth, and Cognitive Functions in Children Exposed to Air Pollution

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Supplementary Table 1  
Complete factorial analysis. MRI volume data for baseline (2007) and follow-up (2008) years

Source	Sum of Squares	Df	Mean Square	F
Volume	328711357576.134	1.00	328711357576.134	8167.582**
Volume X Group	32933584.863	2.00	16466792.431	0.409
Error (Volume)	1086638222.083	27.00	40245860.077	
Year	133476111.143	1.00	133476111.143	1.963
Year X Group	15455424.687	2.00	7727712.344	0.114
Error (Year)	1836358107.247	27.00	68013263.231	
Side	11076348.348	1.00	11076348.348	16.810**
Side X Group	540249.900	2.00	270124.950	0.410
Error (Side)	17790261.194	27.000	658898.563	
Structure	1307729518188.879	2.516	519704592439.277	6159.476**
Structure X Group	1527283597.028	5.033	303478773.054	3.597*
Error (Structure)	5732418679.151	67.940	84374801.882	
Volume X Year	13460457.881	1.000	13460457.881	1.078
Volume X Year X Group	13421918.982	2.000	6710959.491	0.538
Error (Volume X Year)	337069746.201	27.000	12484064.674	
Volume X Side	9279264.491	1.000	9279264.491	16.161**
Volume X Side X Group	1570778.535	2.000	785389.268	1.368
Error (Volume X Side)	15503100.739	27.000	574188.916	
Year X Side	26814.120	1.000	26814.120	0.080
Year X Side X Group	34962.429	2.000	17481.215	0.052
Error (Year X Side)	9017332.138	27.000	333975.264	
Volume X Year X Side	113315.006	1.000	113315.006	0.245
Volume X Year X Side X Group	374943.141	2.000	187471.571	0.405
Error (Volume X Year X Side)	12484881.982	27.000	462403.036	
Volume X Structure	322566551510.961	3.191	101091039651.720	3616.271**
Volume X Structure X Group	183339287.042	6.382	28728891.835	1.028
Error (Volume X Structure)	2408364293.078	86.153	27954501.184	
Year X Structure	133688090.781	2.141	62455491.286	2.002
Year X Structure X Group	47501024.377	4.281	11095602.446	0.356
Error (Year X Structure)	1803304495.054	57.794	31202055.781	
Volume X Year X Structure	27087749.173	3.200	8466038.897	0.840
Volume X Year X Structure X Group	55905042.659	6.399	8736315.865	0.866
Error (Volume X Year X Structure)	871142172.204	86.389	10083994.836	
Side X Structure	278501844.444	3.507	79420744.309	23.958**
Side X Structure X Group	23189038.077	7.013	3306424.537	0.997
Error (Side X Structure)	313866778.419	94.680	3315029.998	
Volume X Side X Structure	93024661.172	4.251	21883592.055	16.444**
Volume X Side X Structure X Group	11437838.931	8.502	1345347.556	1.011
Error (Volume X Side X Structure)	152740175.179	114.774	1330791.547	
Year X Side X Structure	4438614.286	4.236	1047799.120	1.767
Year X Side X Structure X Group	4211090.260	8.472	497044.391	0.838
Error (Year X Side X Structure)	67810890.361	114.376	592879.324	
Volume X Year X Side X Structure	2156786.592	4.396	490609.211	0.707
Volume X Year X Side X Structure X Group	2049301.095	8.792	233079.619	0.336
Error (Volume X Year X Side X Structure)	82388552.929	118.696	694115.326	

Note. \*\* $p < 0.0001$ ; \* $p < 0.01$ . The ANOVA adhered the following full factorial design: Volume (white versus grey matter) X Year (2007 versus 2008) X Group (Mexico City children with white matter hyperintensities, Mexico City children without WMH, and comparison control children) X Hemisphere (right versus left) X Brain regions (including 11 brain locations: frontal, temporal, parietal and occipital gray and white matter, subcortical structures, frontal cingulate gyrus, parietal cingulate gyrus, cerebellum, corpus callosum, prefrontal cortex, and insula). Within subjects effects were corrected using Greenhouse-Geisser adjustment.