<u>**Supplementary Information**</u>

Postema *et al*., Analysis of structural brain asymmetries in Attention-Deficit/Hyperactivity Disorder in 39 datasets

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Supplementary Methods

ENIGMA MRI quality control

Visual inspection of both internal and external Freesurfer segmentations was done per site. All sites followed the standardized ENIGMA protocols that are publicly available on http://enigma.ini.usc.edu/protocols/imaging-protocols. In short, outliers were determined by calculating the interquartile range (IQR) for each of the values per cohort and per diagnostic group (ADHD and Controls). Values that were above or below 1.5 times the IQR were identified as an outlier, and were visually inspected (3D) by the researcher. When a segmentation failure was identified, all values from the affected regions were excluded from further analyses. Additionally, cortical segmentations were overlaid on T1 images of the subjects. Webpages were generated with snapshots from internal slices, and also with external views of the segmentation from different angles. All sites were provided with the manual on how to judge these images, including the most common segmentation errors.

Cohen's d calculation

The t-statistic for the factor 'diagnosis' in each linear mixed effects model was derived and used to calculate Cohen's d, with

$$d = \frac{t * (n1+n2)}{\sqrt{(n1*n2)} * \sqrt{df}}$$

where $n1$ and $n2$ are the number of cases and controls, and df the degrees of freedom. The latter was derived from the lme summary table in R, but can also be calculated using $df = obs - (x1 + x2)$, wherein obs equals the number of observations, $x1$ the number of groups and $x2$ the number of factors in the model.

The 95% confidence intervals for Cohen's d were calculated using $95\% \ CI = d \pm 1.96 * SE$, with the standard error (SE) around Cohen's d calculated according to:

$$SE = \sqrt{\frac{n1+n2}{n1*n2} + \frac{d^2}{2*(n1+n2-2)}}$$

Additional traits

IQ was assessed differently per dataset, but most frequently using an age-appropriate version of the Wechsler intelligence scales (**Supplementary Table S1**).

Comorbidity was most often assessed by means of the Structural Clinical Interview for DSM-IV Axis I Disorders (SCID) (1), or using the Schedule for Affective Disorders and Schizophrenia for School-Age Children Present and Lifetime Version (KSADS-PL) (2) (**Supplementary Table S1**).

ADHD severity was assessed based on the Conners questionnaires (3), and included hyperactivity/impulsivity and inattention scores, which were tested for associations with brain asymmetries in separate models.

The use of psychostimulant medication was recorded in two different ways: current use at the time of scanning ('currently using stimulants' versus 'not currently using stimulants'), or else in terms of lifetime use ('ever used stimulants' versus 'never used stimulants').

Handedness was assessed in different ways across datasets, most often using the Edinburgh handedness questionnaire (4) (**Supplementary Table S1**). Most sites provided handedness data as a binary variable, which we coded 0=left, 1=right. For the NY200 dataset we binarized continuous data from the Edinburgh inventory: left-handers < -0.25 and right-handers >0.25, with those in between assigned as missing.

Table S1. Characteristics of the different datasets

Sample name	N total	N cases (M/F)	N controls (M/F)	median age (range)	F	FS (T)	Diagnostic instrument	IQ instrument	Handedness instrument	Comorbidity instrument	Instrument for symptom rating	Scanner	Voxel size (mm)	col	rows	slices
ACPU[2]	67	39/0	28/0	13 (9, 18)	5.3	3	DSM-IV	WISC subtests and full	Edinburgh handedness questionnaire (Oldfield, 1971)	DISC-IV	Conners parent long version	3T Siemens TIM Trio	0.9x0.9x0.9	208	230	192
Amsterdam Neuroimage	173	68/23	54/28	17 (11, 26)	5.3	1.5	DSM-IV	Vocabulary and block design subtest of WAIS/WIC	Self-report	K-SADS-PL	Algorithm Von Rhein (von Rhein et al, ECAP 2014)	1.5T Siemens Sonata	1x1x1	256	256	176
BergenADHD	81	21/17	16/27	29 (21, 48)	5.3	3	ICD10 or DSM-IV	WASI	Self-report, drawing and writing hand	MINI Plus	ASRS	3T GE Signa	1x1x1	256	256	180
CAPSUZH scan1	57	15/6	21/15	11 (8, 18)	5.3	3	ICD10 and DSM-IV	WISC subtests block design, similarities, digit span	Edinburgh handedness questionnaire (Oldfield, 1971)	K-SADS-PL	NA	3T Philips Achieva XT	1x1x1.1	240	240	160
DATlondon	56	27/0	29/0	16 (12, 21)	5.3	3	DSM-IV	Vocabulary and block design subtests of WAIS	adapted Hollingshead	NA	NA	3T GE Signa	1.1x1.1x1.1	256	256	196
Dublin1	80	30/9	32/9	20.5 (18, 49)	5.3	3	DSM-IV	Verbal comprehension, perceptual reasoning, working memory and processing speed subtests of WAIS-IV	Edinburgh handedness questionnaire (Oldfield, 1971)	SCID-I	Conners Adult ADHD rating scale observer	3T Philips Achieva	1x1x1	256	240	NA
Dundee	45	16/6	10/13	13 (10, 18)	5.3	3	DSM-IV	British Picture Vocabulary	NA	K-SADS-PL, SNAP IV	KSADS-PL	3T Siemens TIM Trio	0.8x0.8x1	256	256	176

Sample name	N total	N cases (M/F)	N controls (M/F)	median age (range)	F	FS (T)	Diagnostic instrument	IQ instrument	Handedness instrument	Comorbidity instrument	Instrument for symptom rating	Scanner	Voxel size (mm)	col	rows	slices
								Scale standardised Score (proxy for verbal IQ) mean 100 SD 15								
IMpACT-NL	274	57/80	55/82	33 (18, 63)	5.3	1.5	DSM-IV	Vocabulary and block design subtests of WAIS	self-report	SCID-I and SCID-II	DSM-IV interview	1.5T Siemens Avanto	1x1x1	256	256	176
ADHD200K KI[1]	85	14/6	39/26	10 (8, 12)	5.3	1.5	DSM-IV	WISC-IV	Not available	NA	Conners Parent Rating Scale Revised Long Version	1.5T Philips Gyroscan NT	1x1x1	256	200	200
Clinic Barcelona	73	52/0	21/0	11 (8, 16)	5.3	3	DSM-IV	Cognitive General Index (CGI) from WISC-IV	NA	K-SADS	Conners Parents' Rating Scales	3T Siemens Trio	0.9375x0.9375x1	256	256	240
MGH	144	41/36	28/39	35 (18, 59)	5.1	1.5	DSM-IV	Vocabulary and block design of WAIS	Annet scale	SCID-I	DSM-IV interview	1.5T Siemens Sonata	1x1x1.5	256	256	158
MTA scan1	18	6/4	5/3	25 (22, 27)	5.3	3	DSM-IV	WISC-III full version (N=87)/subtests of WISC-II (N=42)	Edinburgh handedness questionnaire (Oldfield, 1971)	DISC Youth Self Report (if used data from 14/16 year follow-up) could be DISC parent report if taken from childhood vists	CAARS (if taken from the 14/16 year followup-visit) could be other measures if used childhood	3T GE Signa	1x1x1.2	NA	NA	166
MTA scan2	25	12/4	7/2	25 (21, 28)	5.3	3	DSM-IV	WISC-III full version (N=87)/subtests of WISC-II (N=42)	Edinburgh handedness questionnaire (Oldfield, 1971)	DISC Youth Self Report (if used data from 14/16 year follow-up) could be DISC parent report if	CAARS (if taken from the 14/16 year followup-visit) could be other measures if used childhood	3T GE Discovery 750	1x1x1.2	NA	NA	166

Sample name	N total	N cases (M/F)	N controls (M/F)	median age (range)	F	FS (T)	Diagnostic instrument	IQ instrument	Handedness instrument	Comorbidity instrument	Instrument for symptom rating	Scanner	Voxel size (mm)	col	rows	slices
											taken from childhood vists					
MTA scan3	16	9/1	6/0	24 (22, 26)	5.3	3	DSM-IV	WISC-III full version (N=87)/subtests of WISC-II (N=42)	Edinburgh handedness questionnaire (Oldfield, 1971)	DISC Youth Self Report (if used data from 14/16 year follow-up) could be DISC parent report if taken from childhood vists	CAARS (if taken from the 14/16 year followup-visit) could be other measures if used childhood	3T Siemens Trio	1x1x1.2	NA	NA	160
MTA scan4	22	13/3	6/0	24 (22, 26)	5.3	3	DSM-IV	WISC-III full version (N=87)/subtests of WISC-II (N=42)	Edinburgh handedness questionnaire (Oldfield, 1971)	DISC Youth Self Report (if used data from 14/16 year follow-up) could be DISC parent report if taken from childhood vists	CAARS (if taken from the 14/16 year followup-visit) could be other measures if used childhood	3T Siemens Trio	1x1x1.2	NA	NA	160
MTA scan5	24	16/2	2/4	24.5 (22, 27)	5.3	3	DSM-IV	WISC-III full version (N=87)/subtests of WISC-II (N=42)	Edinburgh handedness questionnaire (Oldfield, 1971)	DISC Youth Self Report (if used data from 14/16 year follow-up) could be DISC parent report if taken from childhood vists	CAARS (if taken from the 14/16 year followup-visit) could be other measures if used childhood	3T Siemens Trio	1x1x1.2	NA	NA	160
MTA scan6	24	17/1	5/1	25 (22, 30)	5.3	3	DSM-IV	WISC-III full version (N=87)/subtests of WISC-II (N=42)	Edinburgh handedness questionnaire (Oldfield, 1971)	DISC Youth Self Report (if used data from 14/16 year follow-up) could be DISC parent report if taken from childhood vists	CAARS (if taken from the 14/16 year followup-visit) could be other measures if used childhood	3T Siemens Trio	1x1x1.2	NA	NA	160
NICAP	146	53/12	47/34	10 (9, 11)	5.3	3	DSM-IV	WASI: vocabulary, matrix reasoning	Self-report	DISC-IV	not applicable	3T Siemens TIM Trio	0.9x0.9x0.9	256	232	176

Sample name	N total	N cases (M/F)	N controls (M/F)	median age (range)	F	FS (T)	Diagnostic instrument	IQ instrument	Handedness instrument	Comorbidity instrument	Instrument for symptom rating	Scanner	Voxel size (mm)	col	rows	slices
Niche scan1	108	49/6	44/9	11 (7, 16)	5.1	1.5	DSM-IV	Vocabulary and block design WISC-III	Self-report	DISC-IV	NA	1.5T Philips Achieva	1x1x1.2	246	160-180	NA
Niche scan2	47	17/4	22/4	9 (7, 16)	5.1	1.5	DSM-IV	Vocabulary and block design WISC-III	Self-report	DISC-IV	NA	1.5T Philips Achieva	1x1x1.5	256	130-150	NA
NIH	331	111/55	110/55	11 (4, 18)	5.3	1.5	DSM-IV	Subtests of WISC	NA	DICA	DSM-IV interview	1.5T GE Signa	0.9375x0.9375x1.5	256	192	124
Nijmegen Neuroimage	158	82/38	23/15	18 (9, 24)	5.3	1.5	DSM-IV	Vocabulary and block design subtest of WAIS/WIC	Self-report	K-SADS-PL	Algorithm Von Rhein (von Rhein et al, ECAP 2014)	1.5T Siemens Avanto	1x1x1	256	256	176
NYU	80	22/18	22/18	30 (18, 53)	5.3	3	DSM-IV	WASI	Edinburgh handedness questionnaire (Oldfield, 1971)	SCID-I	CAARS	3T Siemens Allegra	1x1x1.3	256	256	128
NYUADHD200[1]	228	94/35	48/51	11 (7, 18)	5.3	3	DSM-IV	WASI	Edinburgh handedness questionnaire (Oldfield, 1971)	KSADS	KSADS-PL	3T Siemens Allegra	1.3x1.0x1.3	256	256	128
OHSUADHD200[1]	89	19/7	28/35	9 (7, 13)	5.3	3	DSM-IV	Block Design, Vocabulary and Information subtests of WISC-IV	NA	KSADS	Parent/Teacher Conners rating scale 3rd edition, Parent Teacher ADHD Rating Scale K-SADS	3T Siemens TIM Trio	1.0 x 1.0 x 1.1	256	240	160
OHSU	229	81/39	59/50	9 (7, 13)	5.3	3	DSM-IV and DSM-V	WISC subtests: block design, vocabulary,	Edinburgh handedness questionnaire (modified version)	KSADS-PL	KSADS-PL	3T Siemens TIM Trio	1x1x1.1	256	256	160

Sample name	N total	N cases (M/F)	N controls (M/F)	median age (range)	F	FS (T)	Diagnostic instrument	IQ instrument	Handedness instrument	Comorbidity instrument	Instrument for symptom rating	Scanner	Voxel size (mm)	col	rows	slices
								and information								
Olin Neuropsychiatry Research Centre[2]	181	59/14	58/50	15 (12, 19)	5.3	3 T	DSM-IV	WASI Full Scale	Edinburgh handedness questionnaire (Oldfield, 1971)	KSADS-PL	KSADS-PL	3T Siemens Allegra	1x1x1	208	256	176
PekingADHD200 scan1[1]	32	14/0	18/0	13.5 (12, 16)	5.3	3 T	DSM-IV	WISCC-R	Not available	NA	ADHD rating scale	3T Siemens TIM Trio	1.3×1.0×1.3	256	256	128
PekingADHD200 scan2[1]	64	32/0	31/1	12 (9, 16)	5.3	3 T	DSM-IV	WISCC-R	Not available	NA	ADHD rating scale	3T Siemens TIM Trio	1x1x1	256	256	176
Rubia ADHD	71	41/0	30/0	14 (10, 18)	5.3	3	DSM-IV	WASI	Edinburgh handedness questionnaire (Oldfield, 1971)	Co-morbid disorders were exclusion criteria	SDQ for Hyperactive Impulsive symptoms and Conners parent Rater scale revised for Inattentive symptoms	3T GE Signa	1.0156x1.0156x1.2	256	256	166
SãoPaulo1 – Estado	147	57/24	44/22	27 (17, 50)	5.3	3	DSM-IV	WASI	Edinburgh handedness questionnaire (Oldfield, 1971)	SCID	NA	1.5T Siemens Espree	1.36x1.36x1.2	192	192	160
Sussex[2]	60	19/11	19/11	31 (19, 59)	5.3	1.5	DSM-IV	NART	NA	NA	NA	1.5T Siemens Avanto	1x1x1	256	240	192
SVG Bergen	51	19/4	20/8	10 (8, 12)	5.3	3	DSM-IV	WISC-IV	Self-report, writing hand	K-SADS-PL	K-SADS PL	3T GE Signa	1x1x1	256	256	180
UAB scan1	125	63/6	46/10	15 (6,51)	5.3	3	DSM-IV	WISC	NA	SCID-I	CAARS	3T Philips Achieva	0.94x0.94x1	256	256	180
UAB scan2	73	19/15	18/21	33 (2,52)		1.5	DSM-IV	WISC	NA	SCID-I	CAARS	1.5 T GE Signa	0.86x0.86x1.6	256	256	96

Sample name	N total	N cases (M/F)	N controls (M/F)	median age (range)	F	FS (T)	Diagnostic instrument	IQ instrument	Handedness instrument	Comorbidity instrument	Instrument for symptom rating	Scanner	Voxel size (mm)	col	rows	slices
UCHZ	78	20/19	21/18	14.5 (9, 61)	5.3	3	DSM-IV	HAWIK	Edinburgh handedness questionnaire (Oldfield, 1971)	K-SADS-PL	Adults; adult conners; children conners -3d	3T GE Signa	1x1x1	192	256	172
UKA scan4	59	21/7	13/18	9 (4, 15)	5.3	3	ICD10 or DSM-IV	CPM (N=30) or WASI (N=49) or WISC-IV (N=14)	NA	K-SADS and German K-Dips	German Parental and Teacher Report on ADHD	3T Siemens Trio	0.98x0.98x1	256	256	176
Wurzburg ADHD	107	30/25	24/28	43 (18, 62)	5.3	1.5	DSM-IV	MWT-B	Self-report	SCID-I	DMS-IV interview	3T Siemens Avanto	1 × 1 × 1	256	256	160
ZiCAPS	34	17/4	7/6	13 (9, 15)	5.3	3	DSM-IV	Subscales of WICS-IV	Edinburgh handedness questionnaire (Oldfield, 1971)	ODD and CD with structured clinical interview	KSADS-PL; self-ratings: Conners-3	3T Siemens TIM Trio	1x1x1	256	256	192
Total	**3762**	**1933**	**1829**													

[1] Included in the mega-analysis by Douglas *et al.* (2018), mentioned in the introduction. [2] Only cortical data available for these datasets. F=FreeSurfer version; FS= Field Strength.

Table S2. Full linear model results for the subcortical volume AIs in children

Subcortical volume AI	N cases/ controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Accumbens	801/842	-0.0041	-0.0003	-0.0010	0.0036	0.0041	0.0010	-1.13	-0.07	-1.01	0.260	0.942	0.312	-0.06 (-0.15,0.04)
Amygdala	800/842	-0.0007	0.0042	0.0014	0.0027	0.0030	0.0007	-0.28	1.39	1.85	0.782	0.164	0.064	-0.01 (-0.11,0.08)
Caudate Nucleus	802/842	0.0008	-0.0029	0.0003	0.0015	0.0016	0.0004	0.52	-1.79	0.82	0.600	0.074	0.411	0.03 (-0.07,0.12)
Globus Pallidus	802/840	-0.0012	-0.0002	-0.0017	0.0026	0.0029	0.0007	-0.45	-0.05	-2.31	0.655	0.959	0.021	-0.02 (-0.12,0.07)
Hippocampus	800/840	-0.0004	0.0002	0.0010	0.0021	0.0023	0.0006	-0.21	0.10	1.87	0.837	0.924	0.062	-0.01 (-0.11,0.09)
Putamen	802/839	-0.0008	0.0024	0.0010	0.0014	0.0015	0.0004	-0.61	1.57	2.65	0.540	0.117	**0.008**	-0.03 (-0.13,0.07)
Thalamus[1]	706/733	0.0012	0.0011	0.0037	0.0014	0.0016	0.0004	0.81	0.68	8.60	0.418	0.494	**2.02×10⁻¹⁷**	0.04 (-0.06,0.15)

P-values in **bold** are significant at the uncorrected level (P < 0.05 and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). [1]Thalamus volume was not available from the NIH dataset.

Table S3. Full linear model results for the cortical surface area AIs in children

Cortical surface area AI	N cases / controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Banks of superior temporal sulcus	850/891	-0.0010	0.0017	0.0031	0.0041	0.0046	0.0011	-0.25	0.37	2.81	0.800	0.712	**0.005**	-0.01 (-0.11,0.08)
Caudal anterior cingulate cortex	910/943	-0.0018	0.0065	-0.0006	0.0055	0.0061	0.0014	-0.32	1.06	-0.46	0.750	0.291	0.648	-0.01 (-0.11,0.08)
Caudal middle frontal cortex	912/948	0.0030	-0.0036	-0.0009	0.0036	0.0040	0.0010	0.82	-0.90	-0.91	0.410	0.369	0.364	0.04 (-0.05,0.13)
Cuneus	906/948	0.0045	0.0033	0.0018	0.0032	0.0036	0.0009	1.39	0.91	2.04	0.163	0.365	0.041	0.07 (-0.03,0.16)
Entorhinal cortex	869/915	0.0003	-0.0063	0.0036	0.0058	0.0065	0.0015	0.06	-0.96	2.40	0.953	0.336	**0.017**	0 (-0.09,0.1)
Frontal pole	912/949	-0.0084	0.0053	-0.0012	0.0043	0.0048	0.0010	-1.94	1.10	-1.16	0.052	0.274	0.245	-0.09 (-0.18,0)
Fusiform gyrus	906/945	-0.0034	0.0021	0.0003	0.0025	0.0027	0.0006	-1.36	0.75	0.50	0.173	0.455	0.616	-0.06 (-0.15,0.03)
Inferior parietal cortex	909/943	0.0029	0.0133	-0.0003	0.0026	0.0029	0.0007	1.11	4.59	-0.39	0.265	**4.6×10⁻⁶**	0.697	0.05 (-0.04,0.14)
Inferior temporal gyrus	896/943	0.0015	-0.0006	-0.0004	0.0027	0.0030	0.0007	0.57	-0.22	-0.61	0.568	0.828	0.543	0.03 (-0.06,0.12)
Insula	909/944	0.0038	0.0028	-0.0015	0.0023	0.0025	0.0006	1.66	1.10	-2.39	0.096	0.272	**0.017**	0.08 (-0.01,0.17)
Isthmus cingulate cortex	910/942	-0.0002	-0.0088	-0.0005	0.0036	0.0040	0.0009	-0.06	-2.18	-0.51	0.949	0.029	0.612	0 (-0.09,0.09)
Lateral occipital cortex	911/949	-0.0013	-0.0020	0.0001	0.0024	0.0027	0.0006	-0.53	-0.77	0.24	0.594	0.440	0.810	-0.02 (-0.12,0.07)
Lateral orbitofrontal cortex	912/949	-0.0027	0.0050	-0.0002	0.0020	0.0023	0.0006	-1.35	2.19	-0.33	0.176	0.029	0.745	-0.06 (-0.15,0.03)
Lingual gyrus	912/949	-0.0004	0.0039	-0.0004	0.0024	0.0027	0.0006	-0.15	1.41	-0.68	0.879	0.159	0.499	-0.01 (-0.1,0.08)
Medial orbitofrontal cortex	905/941	0.0076	-0.0040	-0.0004	0.0028	0.0031	0.0008	2.74	-1.26	-0.52	**0.006**	0.208	0.605	0.13 (0.04,0.22)
Middle temporal gyrus	865/913	0.0032	0.0020	0.0010	0.0022	0.0025	0.0006	1.43	0.80	1.62	0.153	0.425	0.106	0.07 (-0.02,0.16)
Paracentral lobule	912/949	-0.0067	0.0028	0.0005	0.0031	0.0034	0.0007	-2.16	0.81	0.70	**0.031**	0.417	0.485	-0.1 (-0.19,-0.01)
Parahippocampal gyrus	906/942	0.0032	0.0123	0.0008	0.0036	0.0040	0.0009	0.89	3.03	0.82	0.373	**0.002**	0.412	0.04 (-0.05,0.13)
Pars opercularis of inferior frontal gyrus	906/946	0.0006	0.0042	0.0003	0.0039	0.0043	0.0009	0.15	0.98	0.31	0.880	0.330	0.759	0.01 (-0.08,0.1)
Pars orbitalis of inferior frontal gyrus	912/948	0.0037	0.0032	-0.0012	0.0029	0.0032	0.0007	1.29	1.00	-1.66	0.198	0.316	0.097	0.06 (-0.03,0.15)
Pars triangularis of inferior frontal gyrus	905/950	0.0035	0.0006	-0.0009	0.0035	0.0039	0.0009	1.00	0.14	-1.04	0.319	0.889	0.300	0.05 (-0.04,0.14)
Pericalcarine cortex	910/948	0.0028	-0.0059	-0.0008	0.0027	0.0031	0.0007	1.03	-1.91	-1.15	0.301	0.056	0.252	0.05 (-0.04,0.14)
Postcentral gyrus	898/934	0.0016	-0.0045	-0.0003	0.0021	0.0024	0.0006	0.77	-1.88	-0.45	0.440	0.060	0.655	0.04 (-0.06,0.13)
Posterior cingulate cortex	909/944	-0.0018	0.0050	0.0006	0.0036	0.0040	0.0009	-0.50	1.26	0.64	0.618	0.209	0.521	-0.02 (-0.11,0.07)
Precentral gyrus	901/943	0.0003	-0.0011	-0.0006	0.0019	0.0021	0.0005	0.18	-0.53	-1.13	0.855	0.594	0.257	0.01 (-0.08,0.1)
Precuneus	912/946	0.0021	0.0052	0.0006	0.0019	0.0022	0.0005	1.06	2.38	1.23	0.289	**0.017**	0.220	0.05 (-0.04,0.14)
Rostral anterior cingulate cortex	902/943	-0.0002	0.0052	-0.0015	0.0047	0.0053	0.0012	-0.04	0.98	-1.20	0.971	0.326	0.231	0 (-0.09,0.09)
Rostral middle frontal gyrus	911/946	-0.0032	-0.0004	0.0006	0.0019	0.0021	0.0005	-1.63	-0.17	1.33	0.103	0.866	0.184	-0.08 (-0.17,0.01)
Superior frontal gyrus	909/946	0.0018	-0.0031	0.0010	0.0016	0.0018	0.0004	1.08	-1.73	2.43	0.279	0.084	**0.015**	0.05 (-0.04,0.14)
Superior parietal cortex	909/947	0.0034	0.0023	-0.0004	0.0020	0.0023	0.0005	1.67	1.02	-0.81	0.094	0.306	0.417	0.08 (-0.01,0.17)
Superior temporal gyrus	839/904	0.0033	-0.0103	0.0001	0.0019	0.0021	0.0005	1.70	-4.83	0.22	0.090	**1.5×10⁻⁶**	0.829	0.08 (-0.01,0.18)
Supramarginal gyrus	897/938	0.0005	-0.0068	0.0007	0.0030	0.0034	0.0008	0.18	-2.00	0.91	0.855	**0.046**	0.361	0.01 (-0.08,0.1)
Temporal pole	906/945	0.0018	-0.0099	0.0011	0.0040	0.0044	0.0010	0.45	-2.26	1.09	0.651	**0.024**	0.276	0.02 (-0.07,0.11)
Transverse temporal gyrus	909/948	-0.0017	0.0032	0.0001	0.0037	0.0042	0.0010	-0.45	0.77	0.12	0.656	0.441	0.903	-0.02 (-0.11,0.07)
Total surface area	912/950	0.0008	0.0004	0.0001	0.0004	0.0004	0.0001	2.10	0.85	0.90	**0.036**	0.395	0.366	0.1 (0.01,0.19)

P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S4. Full linear model results for the cortical thickness AIs in children

Cortical thickness AI	N cases / controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Banks of superior temporal sulcus	851/891	-0.0037	0.0021	-0.0003	0.0019	0.0021	0.0005	-1.99	1.03	-0.65	**0.047**	0.305	0.514	-0.1 (-0.19,0)
Caudal anterior cingulate cortex	910/943	0.0029	-0.0008	-0.0003	0.0025	0.0028	0.0007	1.16	-0.29	-0.44	0.245	0.775	0.662	0.05 (-0.04,0.15)
Caudal middle frontal cortex	911/949	0.0025	-0.0019	-0.0007	0.0012	0.0013	0.0003	2.09	-1.42	-2.09	**0.037**	0.155	0.037	0.1 (0.01,0.19)
Cuneus	907/949	0.0007	0.0016	-0.0003	0.0016	0.0018	0.0004	0.40	0.88	-0.62	0.689	0.378	0.538	0.02 (-0.07,0.11)
Entorhinal cortex	869/916	-0.0046	-0.0086	-0.0008	0.0029	0.0032	0.0007	-1.58	-2.66	-1.16	0.115	**0.008**	0.246	-0.08 (-0.17,0.02)
Frontal pole	911/949	0.0035	-0.0002	-0.0003	0.0032	0.0036	0.0008	1.11	-0.07	-0.39	0.267	0.947	0.694	0.05 (-0.04,0.14)
Fusiform gyrus	908/946	-0.0006	0.0003	-0.0004	0.0010	0.0011	0.0003	-0.59	0.23	-1.46	0.555	0.817	0.143	-0.03 (-0.12,0.06)
Inferior parietal cortex	910/945	0.0001	-0.0012	-0.0007	0.0009	0.0011	0.0003	0.06	-1.12	-2.72	0.955	0.264	**0.007**	0 (-0.09,0.09)
Inferior temporal gyrus	896/942	-0.0015	0.0015	0.0005	0.0013	0.0015	0.0004	-1.17	1.04	1.48	0.243	0.297	0.139	-0.05 (-0.15,0.04)
Insula	910/945	-0.0025	0.0006	0.0000	0.0013	0.0014	0.0003	-1.98	0.45	0.11	**0.047**	0.652	0.913	-0.09 (-0.18,0)
Isthmus cingulate cortex	909/943	-0.0005	0.0017	0.0011	0.0019	0.0021	0.0005	-0.24	0.79	2.42	0.810	0.430	**0.016**	-0.01 (-0.1,0.08)
Lateral occipital cortex	911/950	0.0003	-0.0003	0.0003	0.0011	0.0012	0.0003	0.31	-0.25	1.14	0.760	0.800	0.254	0.01 (-0.08,0.11)
Lateral orbitofrontal cortex	912/949	-0.0004	-0.0033	-0.0002	0.0014	0.0016	0.0004	-0.32	-2.09	-0.45	0.750	**0.037**	0.651	-0.01 (-0.11,0.08)
Lingual gyrus	912/948	-0.0012	-0.0004	0.0009	0.0012	0.0014	0.0003	-0.96	-0.32	2.71	0.339	0.751	0.007	-0.04 (-0.14,0.05)
Medial orbitofrontal cortex	905/942	-0.0034	-0.0060	-0.0003	0.0018	0.0020	0.0005	-1.88	-2.98	-0.69	0.060	0.003	0.488	-0.09 (-0.18,0)
Middle temporal gyrus	866/913	-0.0004	0.0009	0.0005	0.0012	0.0014	0.0003	-0.32	0.62	1.43	0.747	0.535	0.154	-0.02 (-0.11,0.08)
Paracentral lobule	912/949	-0.0018	-0.0005	-0.0008	0.0012	0.0014	0.0003	-1.45	-0.37	-2.56	0.148	0.711	**0.010**	-0.07 (-0.16,0.02)
Parahippocampal gyrus	907/943	-0.0039	-0.0047	0.0009	0.0021	0.0024	0.0005	-1.84	-1.98	1.70	0.066	0.048	0.089	-0.09 (-0.18,0)
Pars opercularis of inferior frontal gyrus	906/946	0.0003	0.0018	-0.0008	0.0013	0.0015	0.0004	0.26	1.23	-2.12	0.798	0.221	**0.034**	0.01 (-0.08,0.1)
Pars orbitalis of inferior frontal gyrus	912/948	0.0020	0.0012	0.0003	0.0022	0.0025	0.0006	0.91	0.47	0.46	0.364	0.635	0.647	0.04 (-0.05,0.13)
Pars triangularis of inferior frontal gyrus	905/950	-0.0006	-0.0011	-0.0001	0.0015	0.0017	0.0004	-0.42	-0.65	-0.32	0.674	0.516	0.752	-0.02 (-0.11,0.07)
Pericalcarine cortex	908/947	-0.0002	0.0009	-0.0008	0.0019	0.0022	0.0005	-0.09	0.41	-1.60	0.925	0.681	0.111	-0.004 (-0.1,0.09)
Postcentral gyrus	897/936	-0.0001	-0.0019	0.0000	0.0011	0.0012	0.0003	-0.08	-1.66	-0.13	0.937	0.097	0.896	-0.004 (-0.1,0.09)
Posterior cingulate cortex	908/947	-0.0009	-0.0010	0.0003	0.0016	0.0017	0.0004	-0.57	-0.57	0.73	0.569	0.570	0.463	-0.03 (-0.12,0.06)
Precentral gyrus	901/942	0.0021	-0.0007	-0.0001	0.0009	0.0010	0.0002	2.35	-0.66	-0.32	**0.019**	0.511	0.753	0.11 (0.02,0.2)
Precuneus	912/946	0.0003	-0.0001	-0.0001	0.0009	0.0010	0.0003	0.35	-0.13	-0.45	0.728	0.893	0.652	0.02 (-0.07,0.11)
Rostral anterior cingulate cortex	902/941	-0.0002	0.0029	-0.0003	0.0022	0.0025	0.0006	-0.09	1.16	-0.54	0.925	0.247	0.588	-0.004 (-0.1,0.09)
Rostral middle frontal gyrus	911/947	0.0005	-0.0003	-0.0006	0.0011	0.0013	0.0003	0.42	-0.26	-2.00	0.676	0.797	**0.046**	0.02 (-0.07,0.11)
Superior frontal gyrus	909/946	0.0002	-0.0010	0.0002	0.0008	0.0009	0.0002	0.30	-1.16	0.76	0.767	0.246	0.450	0.01 (-0.08,0.1)
Superior parietal cortex	909/947	0.0000	-0.0008	-0.0002	0.0009	0.0010	0.0002	-0.02	-0.81	-0.90	0.982	0.418	0.371	-0.001 (-0.09,0.09)
Superior temporal gyrus	840/907	0.0021	0.0026	0.0009	0.0012	0.0013	0.0003	1.85	2.02	2.87	0.065	0.044	**0.004**	0.09 (0,0.18)
Supramarginal gyrus	897/941	-0.0014	0.0004	-0.0004	0.0011	0.0012	0.0003	-1.33	0.32	-1.50	0.183	0.748	0.134	-0.06 (-0.15,0.03)
Temporal pole	906/944	0.0017	0.0001	0.0000	0.0029	0.0032	0.0008	0.59	0.03	0.04	0.555	0.973	0.968	0.03 (-0.06,0.12)
Transverse temporal gyrus	909/948	0.0010	0.0039	0.0006	0.0023	0.0025	0.0006	0.44	1.56	1.01	0.664	0.120	0.313	0.02 (-0.07,0.11)
Total average thickness	912/950	0.0000	-0.0003	0.0000	0.0004	0.0004	0.0001	-0.10	-0.79	0.03	0.918	0.430	0.980	-0.005 (-0.1,0.09)

P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S5. Full linear model results for the subcortical volume AIs in adolescents

Subcortical volume AI	N cases/ controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Accumbens	314/214	-0.0060	0.0080	0.0013	0.0065	0.0077	0.0020	-0.91	1.03	0.67	0.361	0.303	0.501	-0.08 (-0.26,0.09)
Amygdala	314/213	0.0016	0.0051	-0.0016	0.0045	0.0052	0.0013	0.35	0.98	-1.27	0.724	0.328	0.204	0.03 (-0.14,0.21)
Caudate Nucleus	313/214	0.0004	-0.0041	0.0011	0.0025	0.0030	0.0008	0.15	-1.35	1.36	0.877	0.178	0.173	0.01 (-0.16,0.19)
Globus Pallidus	314/214	-0.0039	-0.0019	-0.0022	0.0046	0.0054	0.0014	-0.86	-0.36	-1.54	0.391	0.723	0.125	-0.08 (-0.25,0.1)
Hippocampus	314/214	0.0058	0.0006	-0.0003	0.0034	0.0039	0.0009	1.68	0.15	-0.31	0.093	0.879	0.758	0.15 (-0.02,0.33)
Putamen	313/212	-0.0004	0.0012	0.0019	0.0027	0.0031	0.0008	-0.17	0.38	2.45	0.867	0.707	**0.015**	-0.02 (-0.19,0.16)
Thalamus[1]	293/207	0.0029	-0.0021	0.0005	0.0027	0.0032	0.0008	1.07	-0.64	0.65	0.285	0.521	0.515	0.1 (-0.08,0.28)

P-values in **bold** are significant at the uncorrected level (P < 0.05 and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). [1]Thalamus volume was not available from the NIH dataset.

Table S6. Full linear model results for the cortical surface area AIs in adolescents

Cortical surface area AI	N cases / controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Banks of superior temporal sulcus	368/301	-0.0042	0.0002	0.0009	0.0067	0.0074	0.0018	-0.62	0.03	0.47	0.533	0.980	0.637	-0.05 (-0.2,0.1)
Caudal anterior cingulate cortex	396/322	-0.0094	0.0041	0.0018	0.0088	0.0098	0.0023	-1.07	0.42	0.80	0.286	0.674	0.424	-0.08 (-0.23,0.07)
Caudal middle frontal cortex	396/320	-0.0033	-0.0013	0.0015	0.0055	0.0061	0.0014	-0.60	-0.20	1.01	0.547	0.838	0.314	-0.05 (-0.19,0.1)
Cuneus	396/322	-0.0005	0.0026	-0.0002	0.0047	0.0052	0.0012	-0.10	0.50	-0.17	0.921	0.620	0.866	-0.01 (-0.15,0.14)
Entorhinal cortex	386/318	-0.0068	-0.0161	0.0015	0.0084	0.0093	0.0022	-0.81	-1.72	0.70	0.417	0.085	0.486	-0.06 (-0.21,0.09)
Frontal pole	396/322	0.0084	0.0041	0.0039	0.0069	0.0076	0.0019	1.23	0.54	2.04	0.220	0.590	**0.041**	0.09 (-0.05,0.24)
Fusiform gyrus	392/320	0.0035	0.0063	-0.0010	0.0037	0.0041	0.0010	0.94	1.56	-1.04	0.346	0.120	0.299	0.07 (-0.08,0.22)
Inferior parietal cortex	394/321	-0.0001	0.0006	0.0005	0.0038	0.0042	0.0010	-0.03	0.14	0.55	0.978	0.889	0.584	0 (-0.15,0.15)
Inferior temporal gyrus	372/311	0.0008	-0.0118	0.0011	0.0041	0.0046	0.0011	0.20	-2.54	0.94	0.842	**0.011**	0.349	0.02 (-0.13,0.17)
Insula	393/319	0.0020	0.0050	-0.0012	0.0033	0.0038	0.0010	0.59	1.32	-1.16	0.558	0.187	0.247	0.04 (-0.1,0.19)
Isthmus cingulate cortex	396/322	-0.0072	-0.0126	0.0021	0.0055	0.0061	0.0015	-1.32	-2.06	1.42	0.188	**0.040**	0.156	-0.1 (-0.25,0.05)
Lateral occipital cortex	396/322	-0.0002	0.0094	-0.0011	0.0035	0.0038	0.0009	-0.05	2.46	-1.28	0.961	**0.014**	0.200	0 (-0.15,0.14)
Lateral orbitofrontal cortex	395/322	-0.0019	0.0020	0.0004	0.0030	0.0034	0.0009	-0.61	0.58	0.43	0.540	0.561	0.668	-0.05 (-0.19,0.1)
Lingual gyrus	393/320	-0.0057	-0.0031	0.0004	0.0039	0.0044	0.0012	-1.46	-0.70	0.38	0.144	0.482	0.706	-0.11 (-0.26,0.04)
Medial orbitofrontal cortex	394/321	0.0046	-0.0047	-0.0007	0.0042	0.0047	0.0012	1.10	-0.98	-0.60	0.272	0.326	0.546	0.08 (-0.06,0.23)
Middle temporal gyrus	355/294	-0.0027	-0.0019	0.0007	0.0036	0.0040	0.0009	-0.76	-0.48	0.76	0.446	0.631	0.445	-0.06 (-0.22,0.09)
Paracentral lobule	395/322	-0.0002	0.0086	0.0003	0.0047	0.0052	0.0012	-0.05	1.66	0.21	0.960	0.098	0.833	0 (-0.15,0.14)
Parahippocampal gyrus	393/320	-0.0060	0.0125	-0.0035	0.0052	0.0059	0.0015	-1.15	2.13	-2.30	0.252	**0.034**	**0.022**	-0.09 (-0.24,0.06)
Pars opercularis of inferior frontal gyrus	393/321	0.0082	0.0028	-0.0018	0.0062	0.0069	0.0017	1.33	0.41	-1.07	0.185	0.684	0.285	0.1 (-0.05,0.25)
Pars orbitalis of inferior frontal gyrus	396/321	0.0113	0.0031	-0.0014	0.0047	0.0052	0.0012	2.39	0.58	-1.14	**0.017**	0.560	0.256	0.18 (0.04,0.33)
Pars triangularis of inferior frontal gyrus	396/322	0.0082	-0.0058	-0.0006	0.0056	0.0062	0.0014	1.46	-0.94	-0.44	0.145	0.348	0.660	0.11 (-0.04,0.26)
Pericalcarine cortex	395/322	-0.0064	-0.0057	-0.0007	0.0043	0.0047	0.0012	-1.51	-1.20	-0.56	0.131	0.232	0.578	-0.12 (-0.26,0.03)
Postcentral gyrus	392/320	0.0035	-0.0019	0.0001	0.0033	0.0037	0.0009	1.06	-0.52	0.10	0.289	0.606	0.918	0.08 (-0.07,0.23)
Posterior cingulate cortex	396/322	-0.0044	0.0042	-0.0001	0.0059	0.0065	0.0015	-0.75	0.64	-0.09	0.456	0.525	0.929	-0.06 (-0.2,0.09)
Precentral gyrus	391/320	-0.0051	0.0017	-0.0007	0.0030	0.0033	0.0009	-1.71	0.51	-0.76	0.088	0.612	0.445	-0.13 (-0.28,0.02)
Precuneus	395/322	-0.0021	0.0090	0.0004	0.0029	0.0032	0.0008	-0.73	2.78	0.50	0.466	**0.006**	0.617	-0.06 (-0.2,0.09)
Rostral anterior cingulate cortex	394/321	0.0002	-0.0010	0.0010	0.0073	0.0081	0.0019	0.03	-0.12	0.52	0.977	0.906	0.603	0 (-0.15,0.15)
Rostral middle frontal gyrus	396/322	-0.0009	-0.0018	-0.0008	0.0031	0.0034	0.0008	-0.29	-0.51	-0.89	0.769	0.608	0.376	-0.02 (-0.17,0.12)
Superior frontal gyrus	395/322	0.0040	0.0043	-0.0008	0.0024	0.0026	0.0006	1.70	1.64	-1.35	0.089	0.100	0.179	0.13 (-0.02,0.28)
Superior parietal cortex	394/322	0.0031	0.0057	-0.0008	0.0032	0.0036	0.0009	0.97	1.59	-0.89	0.331	0.113	0.373	0.07 (-0.07,0.22)
Superior temporal gyrus	346/297	0.0005	-0.0135	0.0005	0.0030	0.0033	0.0008	0.16	-4.05	0.63	0.872	**0.000**	0.530	0.01 (-0.14,0.17)
Supramarginal gyrus	393/321	-0.0050	-0.0085	0.0009	0.0043	0.0047	0.0011	-1.16	-1.79	0.82	0.245	0.073	0.415	-0.09 (-0.24,0.06)
Temporal pole	393/320	0.0025	-0.0027	-0.0005	0.0062	0.0068	0.0016	0.40	-0.39	-0.34	0.689	0.695	0.731	0.03 (-0.12,0.18)
Transverse temporal gyrus	393/320	0.0046	-0.0010	0.0020	0.0060	0.0068	0.0018	0.77	-0.14	1.09	0.444	0.886	0.275	0.06 (-0.09,0.21)
Total surface area	396/322	0.0002	0.0007	-0.0001	0.0005	0.0006	0.0002	0.35	1.16	-0.83	0.730	0.247	0.405	0.03 (-0.12,0.17)

P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S7. Full linear model results for the cortical thickness AIs in adolescents.

Cortical thickness AI	N cases / controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Banks of superior temporal sulcus	367/301	-0.0019	0.0042	-0.0012	0.0031	0.0035	0.0009	-0.62	1.22	-1.36	0.539	0.223	0.175	-0.05 (-0.2,0.1)
Caudal anterior cingulate cortex	395/322	-0.0022	-0.0041	0.0003	0.0042	0.0047	0.0013	-0.53	-0.86	0.20	0.597	0.388	0.843	-0.04 (-0.19,0.11)
Caudal middle frontal cortex	395/320	0.0031	-0.0014	-0.0009	0.0018	0.0020	0.0005	1.70	-0.70	-2.00	0.089	0.484	**0.046**	0.13 (-0.02,0.28)
Cuneus	395/322	-0.0049	-0.0032	-0.0002	0.0024	0.0027	0.0007	-2.03	-1.19	-0.26	**0.043**	0.235	0.795	-0.15 (-0.3,-0.01)
Entorhinal cortex	386/318	0.0012	-0.0093	-0.0012	0.0044	0.0050	0.0013	0.27	-1.87	-0.93	0.788	0.062	0.352	0.02 (-0.13,0.17)
Frontal pole	395/322	-0.0061	-0.0036	-0.0005	0.0048	0.0053	0.0012	-1.29	-0.68	-0.40	0.197	0.495	0.687	-0.1 (-0.25,0.05)
Fusiform gyrus	391/320	0.0000	-0.0014	-0.0001	0.0017	0.0020	0.0005	0.02	-0.74	-0.24	0.984	0.460	0.809	0 (-0.15,0.15)
Inferior parietal cortex	393/321	-0.0008	-0.0007	-0.0002	0.0015	0.0017	0.0005	-0.53	-0.41	-0.43	0.594	0.680	0.665	-0.04 (-0.19,0.11)
Inferior temporal gyrus	371/311	0.0006	-0.0045	0.0005	0.0022	0.0026	0.0007	0.27	-1.75	0.77	0.786	0.080	0.441	0.02 (-0.13,0.17)
Insula	392/319	-0.0018	0.0003	-0.0006	0.0018	0.0020	0.0005	-1.00	0.17	-1.25	0.318	0.864	0.211	-0.08 (-0.22,0.07)
Isthmus cingulate cortex	394/321	0.0035	-0.0029	0.0009	0.0029	0.0032	0.0007	1.22	-0.92	1.20	0.222	0.355	0.231	0.09 (-0.05,0.24)
Lateral occipital cortex	395/322	-0.0014	0.0005	0.0005	0.0017	0.0019	0.0005	-0.84	0.26	1.00	0.401	0.796	0.318	-0.06 (-0.21,0.08)
Lateral orbitofrontal cortex	394/322	0.0014	-0.0033	-0.0007	0.0021	0.0024	0.0007	0.67	-1.38	-1.08	0.506	0.167	0.280	0.05 (-0.1,0.2)
Lingual gyrus	392/320	0.0004	-0.0031	0.0001	0.0020	0.0022	0.0005	0.19	-1.39	0.19	0.848	0.163	0.846	0.01 (-0.13,0.16)
Medial orbitofrontal cortex	394/321	0.0028	-0.0011	0.0005	0.0027	0.0031	0.0008	1.02	-0.37	0.60	0.306	0.710	0.550	0.08 (-0.07,0.23)
Middle temporal gyrus	354/294	-0.0010	-0.0049	0.0001	0.0020	0.0023	0.0006	-0.50	-2.13	0.09	0.620	0.034	0.925	-0.04 (-0.19,0.11)
Paracentral lobule	394/322	0.0030	0.0036	0.0010	0.0020	0.0022	0.0006	1.55	1.63	1.69	0.121	0.103	0.091	0.12 (-0.03,0.27)
Parahippocampal gyrus	392/320	-0.0062	-0.0060	-0.0015	0.0037	0.0041	0.0010	-1.68	-1.47	-1.57	0.094	0.143	0.117	-0.13 (-0.28,0.02)
Pars opercularis of inferior frontal gyrus	392/321	0.0018	-0.0025	-0.0008	0.0021	0.0023	0.0005	0.85	-1.06	-1.45	0.395	0.291	0.148	0.07 (-0.08,0.21)
Pars orbitalis of inferior frontal gyrus	395/321	-0.0002	0.0020	-0.0001	0.0040	0.0045	0.0013	-0.06	0.44	-0.08	0.954	0.662	0.935	0 (-0.15,0.14)
Pars triangularis of inferior frontal gyrus	394/322	0.0021	0.0011	-0.0004	0.0023	0.0026	0.0007	0.91	0.43	-0.62	0.364	0.669	0.538	0.07 (-0.08,0.22)
Pericalcarine cortex	394/322	-0.0001	-0.0028	-0.0003	0.0030	0.0033	0.0009	-0.02	-0.82	-0.39	0.983	0.410	0.695	0 (-0.15,0.15)
Postcentral gyrus	390/320	-0.0002	-0.0020	-0.0003	0.0017	0.0019	0.0005	-0.10	-1.08	-0.69	0.923	0.280	0.492	-0.01 (-0.16,0.14)
Posterior cingulate cortex	395/322	-0.0017	-0.0006	0.0004	0.0024	0.0027	0.0007	-0.72	-0.21	0.49	0.474	0.837	0.621	-0.05 (-0.2,0.09)
Precentral gyrus	389/319	-0.0014	-0.0027	-0.0008	0.0014	0.0016	0.0004	-0.99	-1.71	-2.10	0.320	0.088	**0.036**	-0.08 (-0.22,0.07)
Precuneus	394/322	0.0019	0.0003	0.0005	0.0015	0.0017	0.0005	1.22	0.20	1.03	0.223	0.841	0.303	0.09 (-0.05,0.24)
Rostral anterior cingulate cortex	393/321	0.0071	-0.0026	0.0004	0.0037	0.0042	0.0011	1.90	-0.61	0.36	0.058	0.544	0.721	0.15 (0,0.29)
Rostral middle frontal gyrus	395/322	-0.0004	-0.0014	-0.0006	0.0015	0.0018	0.0005	-0.27	-0.79	-1.25	0.784	0.427	0.211	-0.02 (-0.17,0.13)
Superior frontal gyrus	394/322	0.0019	0.0012	-0.0004	0.0012	0.0013	0.0004	1.66	0.90	-1.08	0.098	0.369	0.281	0.13 (-0.02,0.27)
Superior parietal cortex	393/322	-0.0010	-0.0007	-0.0005	0.0014	0.0015	0.0004	-0.73	-0.45	-1.19	0.466	0.654	0.234	-0.06 (-0.2,0.09)
Superior temporal gyrus	345/297	0.0015	0.0006	-0.0001	0.0018	0.0020	0.0005	0.82	0.31	-0.25	0.415	0.757	0.801	0.07 (-0.09,0.22)
Supramarginal gyrus	392/321	-0.0011	0.0002	-0.0005	0.0017	0.0019	0.0005	-0.66	0.08	-0.93	0.508	0.933	0.355	-0.05 (-0.2,0.1)
Temporal pole	391/320	0.0012	0.0031	-0.0006	0.0041	0.0046	0.0011	0.30	0.68	-0.52	0.766	0.495	0.602	0.02 (-0.12,0.17)
Transverse temporal gyrus	392/320	0.0018	0.0008	-0.0003	0.0040	0.0045	0.0011	0.46	0.19	-0.32	0.649	0.853	0.746	0.03 (-0.11,0.18)
Total average thickness	395/322	0.0002	-0.0011	-0.0001	0.0006	0.0006	0.0002	0.29	-1.72	-0.90	0.775	0.086	0.370	0.02 (-0.13,0.17)

P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S8. Full linear model results for the subcortical volume AIs in adults

Subcortical volume AI	N cases/ controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Accumbens	562/492	0.0006	0.0054	0.0000	0.0050	0.0052	0.0003	0.12	1.03	-0.14	0.901	0.304	0.888	0.01 (-0.11,0.13)
Amygdala	562/492	-0.0016	0.0066	0.0000	0.0039	0.0041	0.0002	-0.40	1.63	0.02	0.686	0.104	0.983	-0.03 (-0.15,0.1)
Caudate Nucleus	562/492	0.0013	-0.0008	0.0001	0.0016	0.0017	0.0001	0.76	-0.47	1.54	0.445	0.641	0.123	0.05 (-0.07,0.17)
Globus Pallidus	563/491	-0.0101	-0.0057	-0.0003	0.0035	0.0037	0.0002	-2.90	-1.55	-1.41	***0.004***	0.121	0.160	-0.18 (-0.3,-0.06)
Hippocampus	562/491	0.0019	0.0001	-0.0002	0.0026	0.0026	0.0001	0.73	0.04	-1.83	0.463	0.969	0.067	0.05 (-0.08,0.17)
Putamen	563/492	-0.0014	-0.0018	0.0003	0.0022	0.0023	0.0001	-0.65	-0.79	2.67	0.516	0.431	**0.008**	-0.04 (-0.16,0.08)
Thalamus[1]	563/490	0.0013	-0.0013	0.0002	0.0018	0.0019	0.0001	0.71	-0.68	1.92	0.480	0.497	0.055	0.04 (-0.08,0.17)

P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). [1]Thalamus volume was not available from the NIH dataset.

Table S9. Full linear model results for the cortical surface area AIs in adults

Cortical surface area AI	N cases / controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Banks of superior temporal sulcus	595/514	0.0012	-0.0034	0.0001	0.0050	0.0051	0.0003	0.23	-0.67	0.58	0.814	0.502	0.561	0.01 (-0.1,0.13)
Caudal anterior cingulate cortex	610/538	0.0027	0.0094	-0.0001	0.0073	0.0075	0.0004	0.38	1.25	-0.17	0.706	0.211	0.865	0.02 (-0.09,0.14)
Caudal middle frontal cortex	613/539	0.0054	0.0006	-0.0007	0.0044	0.0045	0.0002	1.23	0.14	-3.18	0.218	0.891	**0.002**	0.07 (-0.04,0.19)
Cuneus	612/539	-0.0079	-0.0040	-0.0002	0.0044	0.0045	0.0002	-1.82	-0.88	-0.69	0.068	0.378	0.488	-0.11 (-0.23,0.01)
Entorhinal cortex	550/478	-0.0112	-0.0004	0.0006	0.0068	0.0071	0.0004	-1.66	-0.06	1.58	0.097	0.954	0.115	-0.1 (-0.23,0.02)
Frontal pole	613/539	-0.0061	0.0053	0.0001	0.0054	0.0055	0.0003	-1.14	0.97	0.52	0.253	0.330	0.603	-0.07 (-0.18,0.05)
Fusiform gyrus	567/493	-0.0048	0.0073	0.0002	0.0030	0.0031	0.0002	-1.59	2.36	1.18	0.112	**0.018**	0.238	-0.1 (-0.22,0.02)
Inferior parietal cortex	610/538	-0.0004	0.0018	0.0001	0.0030	0.0031	0.0002	-0.13	0.59	0.48	0.894	0.552	0.628	-0.01 (-0.12,0.11)
Inferior temporal gyrus	563/493	0.0037	0.0006	0.0001	0.0032	0.0033	0.0002	1.16	0.19	0.39	0.247	0.850	0.695	0.07 (-0.05,0.19)
Insula	605/532	-0.0012	0.0046	-0.0001	0.0025	0.0026	0.0001	-0.46	1.76	-0.56	0.643	0.078	0.573	-0.03 (-0.15,0.09)
Isthmus cingulate cortex	613/539	0.0030	-0.0084	0.0003	0.0044	0.0045	0.0002	0.69	-1.86	1.27	0.488	0.064	0.204	0.04 (-0.07,0.16)
Lateral occipital cortex	610/539	0.0055	0.0007	0.0000	0.0028	0.0029	0.0001	1.97	0.23	0.27	**0.049**	0.822	0.786	0.12 (0,0.23)
Lateral orbitofrontal cortex	613/539	-0.0017	0.0029	0.0001	0.0021	0.0021	0.0001	-0.81	1.35	0.67	0.416	0.176	0.500	-0.05 (-0.17,0.07)
Lingual gyrus	568/494	0.0023	0.0024	-0.0001	0.0034	0.0036	0.0002	0.67	0.67	-0.76	0.504	0.500	0.446	0.04 (-0.08,0.16)
Medial orbitofrontal cortex	611/539	-0.0012	-0.0046	0.0003	0.0033	0.0034	0.0002	-0.35	-1.33	1.71	0.723	0.184	0.087	-0.02 (-0.13,0.1)
Middle temporal gyrus	555/477	-0.0004	-0.0015	0.0002	0.0027	0.0028	0.0001	-0.14	-0.52	1.12	0.887	0.602	0.261	-0.01 (-0.13,0.12)
Paracentral lobule	612/538	-0.0041	0.0053	-0.0001	0.0038	0.0039	0.0002	-1.09	1.35	-0.63	0.277	0.178	0.530	-0.06 (-0.18,0.05)
Parahippocampal gyrus	568/491	-0.0060	0.0100	0.0001	0.0040	0.0041	0.0002	-1.50	2.45	0.54	0.134	**0.014**	0.587	-0.09 (-0.21,0.03)
Pars opercularis of inferior frontal gyrus	611/539	0.0026	0.0081	0.0000	0.0047	0.0048	0.0002	0.56	1.70	-0.11	0.578	0.090	0.910	0.03 (-0.08,0.15)
Pars orbitalis of inferior frontal gyrus	612/539	0.0021	0.0049	0.0004	0.0036	0.0037	0.0002	0.60	1.33	2.44	0.549	0.185	**0.015**	0.04 (-0.08,0.15)
Pars triangularis of inferior frontal gyrus	612/538	-0.0026	-0.0006	0.0002	0.0046	0.0047	0.0002	-0.56	-0.12	0.86	0.574	0.902	0.388	-0.03 (-0.15,0.08)
Pericalcarine cortex	612/539	0.0000	-0.0029	-0.0003	0.0039	0.0040	0.0002	0.00	-0.73	-1.46	0.997	0.469	0.145	0.0003 (-0.12,0.12)
Postcentral gyrus	607/528	-0.0001	0.0004	-0.0001	0.0027	0.0028	0.0001	-0.03	0.14	-0.84	0.975	0.892	0.398	-0.002 (-0.12,0.11)
Posterior cingulate cortex	613/539	0.0009	0.0055	0.0004	0.0046	0.0047	0.0002	0.21	1.15	1.54	0.836	0.249	0.124	0.01 (-0.1,0.13)
Precentral gyrus	609/537	-0.0047	0.0023	0.0000	0.0024	0.0025	0.0001	-1.93	0.90	-0.18	0.054	0.366	0.857	-0.11 (-0.23,0)
Precuneus	612/539	0.0011	0.0054	0.0001	0.0025	0.0025	0.0001	0.45	2.13	0.70	0.650	**0.034**	0.486	0.03 (-0.09,0.14)
Rostral anterior cingulate cortex	610/535	-0.0055	0.0035	0.0005	0.0060	0.0062	0.0003	-0.92	0.57	1.65	0.360	0.569	0.100	-0.05 (-0.17,0.06)
Rostral middle frontal gyrus	613/538	-0.0012	0.0008	0.0001	0.0024	0.0024	0.0001	-0.53	0.34	0.90	0.597	0.732	0.371	-0.03 (-0.15,0.08)
Superior frontal gyrus	610/535	-0.0032	-0.0008	0.0000	0.0021	0.0021	0.0001	-1.58	-0.38	-0.40	0.115	0.702	0.692	-0.09 (-0.21,0.02)
Superior parietal cortex	610/539	-0.0010	-0.0001	0.0000	0.0025	0.0026	0.0001	-0.41	-0.06	0.30	0.683	0.954	0.761	-0.02 (-0.14,0.09)
Superior temporal gyrus	547/476	-0.0034	-0.0095	-0.0002	0.0026	0.0027	0.0001	-1.30	-3.51	-1.80	0.195	**0.000**	0.073	-0.08 (-0.2,0.04)
Supramarginal gyrus	608/535	-0.0045	-0.0087	-0.0002	0.0037	0.0038	0.0002	-1.24	-2.31	-1.14	0.214	**0.021**	0.254	-0.07 (-0.19,0.04)
Temporal pole	568/494	-0.0045	-0.0124	0.0001	0.0048	0.0050	0.0003	-0.95	-2.47	0.21	0.344	**0.014**	0.836	-0.06 (-0.18,0.06)
Transverse temporal gyrus	568/494	0.0004	0.0041	0.0002	0.0051	0.0052	0.0003	0.07	0.78	0.91	0.941	0.437	0.361	0.005 (-0.12,0.13)
Total surface area	613/539	-0.0008	0.0005	0.0000	0.0006	0.0007	0.0000	-1.20	0.72	0.27	0.232	0.474	0.789	-0.07 (-0.19,0.05)

P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S10. Full linear model results for the cortical thickness AIs in adults

Cortical thickness AI	N cases / controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Banks of superior temporal sulcus	595/514	-0.0011	0.0004	-0.0001	0.0024	0.0025	0.0001	-0.46	0.17	-0.51	0.644	0.865	0.608	-0.03 (-0.15,0.09)
Caudal anterior cingulate cortex	610/538	0.0061	0.0042	0.0000	0.0033	0.0034	0.0002	1.89	1.25	-0.23	0.060	0.213	0.815	0.11 (0,0.23)
Caudal middle frontal cortex	613/539	0.0005	-0.0019	-0.0001	0.0015	0.0016	0.0001	0.35	-1.21	-1.18	0.728	0.226	0.240	0.02 (-0.09,0.14)
Cuneus	612/539	0.0034	-0.0005	0.0001	0.0018	0.0019	0.0001	1.89	-0.25	1.08	0.059	0.799	0.279	0.11 (0,0.23)
Entorhinal cortex	550/478	-0.0017	0.0009	-0.0002	0.0036	0.0039	0.0002	-0.46	0.24	-1.09	0.646	0.809	0.275	-0.03 (-0.15,0.09)
Frontal pole	613/539	0.0044	-0.0071	-0.0002	0.0033	0.0034	0.0002	1.32	-2.08	-1.12	0.187	**0.038**	0.263	0.08 (-0.04,0.19)
Fusiform gyrus	567/493	0.0004	0.0007	-0.0001	0.0014	0.0015	0.0001	0.26	0.44	-1.20	0.792	0.662	0.229	0.02 (-0.1,0.14)
Inferior parietal cortex	610/538	0.0008	0.0024	0.0000	0.0012	0.0012	0.0001	0.66	1.94	-0.54	0.512	0.053	0.593	0.04 (-0.08,0.16)
Inferior temporal gyrus	563/493	-0.0003	0.0011	-0.0002	0.0015	0.0016	0.0001	-0.20	0.69	-1.94	0.845	0.490	0.053	-0.01 (-0.13,0.11)
Insula	605/532	-0.0001	-0.0007	-0.0001	0.0014	0.0015	0.0001	-0.07	-0.47	-1.27	0.945	0.641	0.203	0 (-0.12,0.11)
Isthmus cingulate cortex	613/539	-0.0021	0.0000	0.0000	0.0022	0.0023	0.0001	-0.93	0.00	-0.30	0.351	0.996	0.766	-0.06 (-0.17,0.06)
Lateral occipital cortex	610/539	0.0026	0.0010	0.0001	0.0012	0.0012	0.0001	2.22	0.82	1.11	**0.026**	0.415	0.269	0.13 (0.02,0.25)
Lateral orbitofrontal cortex	613/539	0.0023	-0.0035	-0.0001	0.0015	0.0016	0.0001	1.48	-2.18	-1.25	0.139	**0.030**	0.212	0.09 (-0.03,0.2)
Lingual gyrus	568/494	-0.0008	-0.0008	-0.0001	0.0015	0.0016	0.0001	-0.53	-0.50	-1.34	0.593	0.619	0.182	-0.03 (-0.15,0.09)
Medial orbitofrontal cortex	611/539	0.0039	-0.0033	-0.0001	0.0020	0.0020	0.0001	2.01	-1.63	-0.58	**0.045**	0.103	0.560	0.12 (0,0.24)
Middle temporal gyrus	555/477	-0.0038	-0.0029	0.0001	0.0015	0.0016	0.0001	-2.63	-1.87	0.84	**0.009**	0.061	0.401	-0.17 (-0.29,-0.04)
Paracentral lobule	612/538	-0.0005	0.0008	0.0000	0.0015	0.0016	0.0001	-0.29	0.47	0.34	0.768	0.637	0.731	-0.02 (-0.13,0.1)
Parahippocampal gyrus	568/491	0.0026	0.0045	0.0000	0.0030	0.0031	0.0002	0.85	1.42	-0.02	0.394	0.156	0.984	0.05 (-0.07,0.17)
Pars opercularis of inferior frontal gyrus	611/539	-0.0002	0.0018	0.0000	0.0017	0.0018	0.0001	-0.14	0.98	-0.12	0.892	0.326	0.903	-0.01 (-0.12,0.11)
Pars orbitalis of inferior frontal gyrus	612/539	0.0021	-0.0008	0.0000	0.0023	0.0024	0.0001	0.90	-0.32	0.13	0.370	0.748	0.896	0.05 (-0.06,0.17)
Pars triangularis of inferior frontal gyrus	612/538	-0.0002	0.0012	0.0000	0.0019	0.0020	0.0001	-0.12	0.61	-0.29	0.901	0.545	0.769	-0.01 (-0.12,0.11)
Pericalcarine cortex	612/539	0.0062	-0.0002	-0.0002	0.0021	0.0022	0.0001	2.90	-0.11	-1.61	**0.004**	0.912	0.107	0.17 (0.06,0.29)
Postcentral gyrus	607/528	-0.0033	-0.0016	0.0000	0.0013	0.0014	0.0001	-2.48	-1.13	-0.01	**0.013**	0.260	0.990	-0.15 (-0.27,-0.03)
Posterior cingulate cortex	613/539	-0.0003	0.0002	-0.0002	0.0018	0.0019	0.0001	-0.17	0.13	-1.83	0.868	0.897	0.068	-0.01 (-0.13,0.11)
Precentral gyrus	609/537	0.0018	-0.0029	-0.0001	0.0013	0.0013	0.0001	1.39	-2.21	-1.58	0.166	0.027	0.115	0.08 (-0.03,0.2)
Precuneus	612/539	0.0005	-0.0018	-0.0001	0.0012	0.0012	0.0001	0.41	-1.43	-1.08	0.685	0.154	0.279	0.02 (-0.09,0.14)
Rostral anterior cingulate cortex	610/535	0.0027	0.0021	-0.0004	0.0030	0.0031	0.0002	0.92	0.69	-2.17	0.355	0.493	**0.030**	0.06 (-0.06,0.17)
Rostral middle frontal gyrus	613/538	-0.0011	0.0001	-0.0001	0.0012	0.0013	0.0001	-0.96	0.11	-1.04	0.339	0.910	0.298	-0.06 (-0.17,0.06)
Superior frontal gyrus	610/535	0.0004	-0.0005	-0.0001	0.0009	0.0009	0.0000	0.47	-0.50	-1.68	0.640	0.616	0.094	0.03 (-0.09,0.14)
Superior parietal cortex	610/539	0.0002	-0.0009	0.0000	0.0010	0.0010	0.0001	0.19	-0.91	0.92	0.850	0.363	0.360	0.01 (-0.1,0.13)
Superior temporal gyrus	547/476	-0.0014	0.0013	0.0000	0.0015	0.0016	0.0001	-0.92	0.78	-0.29	0.358	0.435	0.770	-0.06 (-0.18,0.06)
Supramarginal gyrus	608/535	-0.0001	0.0011	-0.0001	0.0014	0.0015	0.0001	-0.08	0.78	-0.67	0.934	0.437	0.505	0 (-0.12,0.11)
Temporal pole	568/494	-0.0016	0.0019	0.0001	0.0033	0.0035	0.0002	-0.49	0.54	0.74	0.624	0.590	0.460	-0.03 (-0.15,0.09)
Transverse temporal gyrus	568/494	-0.0027	0.0031	-0.0003	0.0029	0.0029	0.0001	-0.95	1.06	-1.79	0.344	0.289	0.073	-0.06 (-0.18,0.06)
Total average thickness	613/539	0.0001	-0.0003	-0.0001	0.0004	0.0004	0.0000	0.31	-0.63	-2.51	0.754	0.526	**0.012**	0.02 (-0.1,0.13)

P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S11. Full linear model results for the subcortical volume AIs in all age groups combined.

Subcortical volume AI		beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
	N cases/ controls	diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Accumbens	1689/1566	-0.0026	0.0032	-0.0002	0.0027	0.0029	0.0002	-0.99	1.08	-1.24	0.321	0.280	0.217	-0.03 (-0.1,0.03)
Amygdala	1688/1565	-0.0010	0.0045	0.0000	0.0020	0.0022	0.0001	-0.52	2.06	0.11	0.606	0.039	0.911	-0.02 (-0.09,0.05)
Caudate Nucleus	1689/1566	0.0008	-0.0021	0.0002	0.0010	0.0011	0.0001	0.83	-1.92	2.68	0.407	0.055	**0.007**	0.03 (-0.04,0.1)
Globus Pallidus	1691/1562	-0.0049	-0.0021	-0.0006	0.0019	0.0021	0.0001	-2.57	-1.02	-4.10	**0.010**	0.308	***4.3×10⁻⁵***	-0.09 (-0.16,-0.02)
Hippocampus	1688/1562	0.0007	0.0003	-0.0001	0.0014	0.0016	0.0001	0.50	0.22	-1.64	0.616	0.828	0.102	0.02 (-0.05,0.09)
Putamen	1690/1556	-0.0012	0.0008	0.0003	0.0011	0.0012	0.0001	-1.12	0.65	4.49	0.263	0.514	***7.2×10⁻⁶***	-0.04 (-0.11,0.03)
Thalamus[1]	1574/1448	0.0015	-0.0014	0.0007	0.0010	0.0012	0.0001	1.45	-1.19	8.67	0.146	0.233	***7.0×10⁻¹⁸***	0.05 (-0.02,0.12)

P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). [1]Thalamus volume was not available from the NIH dataset

Table S12. Full linear model results for the cortical surface area AI in all age groups combined.

Surface area AI	N cases / controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Banks of superior temporal sulcus	1825/1726	-0.0020	-0.0003	0.0002	0.0029	0.0031	0.0002	-0.70	-0.10	0.85	0.483	0.917	0.394	-0.02 (-0.09,0.04)
Caudal anterior cingulate cortex	1928/1821	-0.0018	0.0070	-0.0004	0.0039	0.0042	0.0002	-0.47	1.66	-2.07	0.636	0.097	**0.038**	-0.02 (-0.08,0.05)
Caudal middle frontal cortex	1933/1825	0.0032	-0.0017	-0.0005	0.0025	0.0027	0.0002	1.31	-0.61	-3.17	0.192	0.540	**0.002**	0.04 (-0.02,0.11)
Cuneus	1926/1826	-0.0007	0.0001	0.0003	0.0023	0.0025	0.0002	-0.33	0.03	1.96	0.742	0.978	0.050	-0.01 (-0.07,0.05)
Entorhinal cortex	1817/1717	-0.0038	-0.0074	0.0007	0.0039	0.0043	0.0002	-0.96	-1.72	3.11	0.337	0.086	**0.002**	-0.03 (-0.1,0.03)
Frontal pole	1933/1828	-0.0050	0.0062	0.0000	0.0030	0.0032	0.0001	-1.65	1.92	0.14	0.099	0.055	0.891	-0.05 (-0.12,0.01)
Fusiform gyrus	1877/1776	-0.0025	0.0043	0.0000	0.0017	0.0018	0.0001	-1.45	2.38	0.34	0.147	**0.017**	0.733	-0.05 (-0.11,0.02)
Inferior parietal cortex	1925/1818	0.0014	0.0072	-0.0001	0.0017	0.0019	0.0001	0.78	3.78	-0.97	0.435	**0.000**	0.332	0.03 (-0.04,0.09)
Inferior temporal gyrus	1843/1765	0.0021	-0.0017	0.0001	0.0018	0.0020	0.0001	1.15	-0.88	0.57	0.251	0.381	0.571	0.04 (-0.03,0.1)
Insula	1918/1813	0.0016	0.0043	-0.0004	0.0015	0.0017	0.0001	1.07	2.62	-3.87	0.283	**0.009**	**0.0002**	0.04 (-0.03,0.1)
Isthmus cingulate cortex	1931/1821	-0.0008	-0.0091	-0.0001	0.0025	0.0027	0.0001	-0.32	-3.39	-0.72	0.752	**0.001**	0.472	-0.01 (-0.07,0.05)
Lateral occipital cortex	1929/1828	0.0011	0.0009	0.0001	0.0016	0.0017	0.0001	0.71	0.49	1.27	0.478	0.623	0.204	0.02 (-0.04,0.09)
Lateral orbitofrontal cortex	1932/1828	-0.0024	0.0038	0.0001	0.0013	0.0014	0.0001	-1.86	2.66	1.08	0.064	**0.008**	0.280	-0.06 (-0.12,0)
Lingual gyrus	1885/1780	-0.0002	0.0022	0.0000	0.0018	0.0019	0.0001	-0.10	1.15	0.37	0.917	0.249	0.708	0 (-0.07,0.06)
Medial orbitofrontal cortex	1922/1819	0.0041	-0.0042	0.0004	0.0019	0.0021	0.0001	2.19	-2.05	2.60	**0.029**	0.041	**0.009**	0.07 (0.01,0.14)
Middle temporal gyrus	1786/1704	0.0013	0.0002	0.0002	0.0015	0.0017	0.0001	0.88	0.14	1.91	0.382	0.885	0.056	0.03 (-0.04,0.1)
Paracentral lobule	1931/1827	-0.0047	0.0044	-0.0001	0.0021	0.0023	0.0001	-2.19	1.90	-1.41	**0.029**	0.058	0.159	-0.07 (-0.14,-0.01)
Parahippocampal gyrus	1879/1771	-0.0008	0.0112	-0.0001	0.0024	0.0026	0.0001	-0.35	4.25	-0.63	0.729	**2.1×10⁻⁵**	0.526	-0.01 (-0.08,0.05)
Pars opercularis of inferior frontal gyrus	1922/1824	0.0026	0.0047	0.0000	0.0027	0.0029	0.0001	0.95	1.62	0.36	0.340	0.105	0.719	0.03 (-0.03,0.1)
Pars orbitalis of inferior frontal gyrus	1932/1826	0.0047	0.0040	0.0001	0.0020	0.0022	0.0001	2.32	1.85	1.31	**0.021**	0.065	0.189	0.08 (0.01,0.14)
Pars triangularis of inferior frontal gyrus	1925/1828	0.0030	-0.0004	-0.0001	0.0025	0.0027	0.0001	1.19	-0.15	-0.52	0.236	0.879	0.600	0.04 (-0.03,0.1)
Pericalcarine cortex	1929/1827	0.0001	-0.0043	0.0001	0.0020	0.0022	0.0001	0.07	-1.98	0.92	0.941	**0.048**	0.355	0.002 (-0.06,0.07)
Postcentral gyrus	1909/1800	0.0013	-0.0021	0.0001	0.0015	0.0016	0.0001	0.86	-1.27	0.60	0.391	0.203	0.551	0.03 (-0.04,0.09)
Posterior cingulate cortex	1930/1823	-0.0014	0.0046	0.0001	0.0025	0.0028	0.0001	-0.53	1.66	0.87	0.594	0.097	0.382	-0.02 (-0.08,0.05)
Precentral gyrus	1913/1818	-0.0023	0.0009	0.0000	0.0013	0.0014	0.0001	-1.71	0.65	0.11	0.087	0.514	0.910	-0.06 (-0.12,0.01)
Precuneus	1931/1825	0.0010	0.0056	0.0000	0.0013	0.0014	0.0001	0.73	3.90	-0.11	0.464	**0.0001**	0.912	0.02 (-0.04,0.09)
Rostral anterior cingulate cortex	1918/1817	-0.0022	0.0029	-0.0001	0.0033	0.0036	0.0002	-0.67	0.81	-0.68	0.506	0.416	0.496	-0.02 (-0.09,0.04)
Rostral middle frontal gyrus	1932/1824	-0.0021	-0.0005	-0.0001	0.0013	0.0014	0.0001	-1.59	-0.38	-1.69	0.112	0.704	0.092	-0.05 (-0.12,0.01)
Superior frontal gyrus	1926/1821	0.0007	-0.0014	0.0001	0.0011	0.0012	0.0001	0.59	-1.19	1.92	0.555	0.234	0.056	0.02 (-0.04,0.08)
Superior parietal cortex	1925/1826	0.0016	0.0023	-0.0001	0.0014	0.0015	0.0001	1.10	1.49	-2.34	0.273	0.137	**0.019**	0.04 (-0.03,0.1)
Superior temporal gyrus	1743/1692	0.0007	-0.0103	0.0000	0.0014	0.0015	0.0001	0.50	-6.92	0.04	0.620	**5.4×10⁻¹²**	0.972	0.02 (-0.05,0.08)
Supramarginal gyrus	1910/1809	-0.0024	-0.0076	-0.0002	0.0020	0.0022	0.0001	-1.18	-3.38	-1.31	0.236	**0.001**	0.189	-0.04 (-0.1,0.03)
Temporal pole	1879/1777	0.0001	-0.0096	0.0002	0.0027	0.0030	0.0002	0.04	-3.23	1.28	0.965	**0.001**	0.201	0.001 (-0.06,0.07)
Transverse temporal gyrus	1882/1780	0.0002	0.0032	0.0003	0.0027	0.0029	0.0002	0.09	1.09	1.59	0.931	0.276	0.111	0.003 (-0.06,0.07)
Total surface area	1933/1829	0.0002	0.0005	0.0000	0.0003	0.0003	0.0000	0.61	1.59	0.04	0.540	0.112	0.965	0.02 (-0.04,0.08)

P-values in **bold** are significant at the uncorrected level (P<0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S13. Full linear model results for the cortical thickness AIs in all age groups combined.

Thickness AI	N cases / controls	beta-coefficient			Standard Error			t-value			p-value			Cohen's d (95% CI)
		diag	sex	age	diag	sex	age	diag	sex	age	diag	sex	age	diag
Banks of superior temporal sulcus	1824/1726	-0.0025	0.0021	-0.0001	0.0013	0.0014	0.0001	-1.90	1.43	-0.91	0.058	0.152	0.363	-0.06 (-0.13,0)
Caudal anterior cingulate cortex	1927/1821	0.0028	0.0002	-0.0001	0.0018	0.0019	0.0001	1.61	0.10	-0.69	0.108	0.919	0.488	0.05 (-0.01,0.12)
Caudal middle frontal cortex	1931/1826	0.0019	-0.0016	-0.0001	0.0008	0.0009	0.0001	2.22	-1.75	-1.65	**0.027**	0.081	0.099	0.07 (0.01,0.14)
Cuneus	1926/1827	0.0006	-0.0001	0.0000	0.0011	0.0012	0.0001	0.58	-0.05	0.30	0.563	0.964	0.764	0.02 (-0.05,0.08)
Entorhinal cortex	1817/1718	-0.0023	-0.0057	-0.0003	0.0020	0.0022	0.0001	-1.12	-2.56	-2.48	0.261	**0.010**	0.013	-0.04 (-0.1,0.03)
Frontal pole	1931/1828	0.0020	-0.0034	-0.0002	0.0021	0.0023	0.0001	0.95	-1.48	-1.41	0.344	0.140	0.160	0.03 (-0.03,0.1)
Fusiform gyrus	1878/1777	-0.0001	0.0001	-0.0001	0.0007	0.0008	0.0001	-0.08	0.18	-1.44	0.938	0.858	0.151	-0.003 (-0.07,0.06)
Inferior parietal cortex	1925/1821	0.0002	0.0003	0.0000	0.0007	0.0007	0.0000	0.24	0.45	-0.72	0.810	0.654	0.471	0.01 (-0.06,0.07)
Inferior temporal gyrus	1842/1764	-0.0004	0.0000	-0.0002	0.0009	0.0010	0.0001	-0.40	0.00	-2.36	0.691	0.999	**0.018**	-0.01 (-0.08,0.05)
Insula	1918/1814	-0.0017	0.0004	-0.0001	0.0008	0.0009	0.0001	-1.97	0.42	-2.26	**0.049**	0.678	**0.024**	-0.06 (-0.13,0)
Isthmus cingulate cortex	1928/1821	-0.0001	-0.0001	0.0001	0.0013	0.0014	0.0001	-0.11	-0.09	1.66	0.909	0.927	0.098	-0.004 (-0.07,0.06)
Lateral occipital cortex	1928/1829	0.0006	0.0005	0.0001	0.0007	0.0008	0.0001	0.82	0.58	1.57	0.410	0.563	0.118	0.03 (-0.04,0.09)
Lateral orbitofrontal cortex	1931/1828	0.0007	-0.0032	0.0000	0.0009	0.0010	0.0001	0.81	-3.19	-0.18	0.419	**0.001**	0.856	0.03 (-0.04,0.09)
Lingual gyrus	1884/1779	-0.0009	-0.0013	-0.0001	0.0009	0.0010	0.0001	-1.06	-1.37	-1.63	0.290	0.171	0.104	-0.04 (-0.1,0.03)
Medial orbitofrontal cortex	1922/1820	0.0000	-0.0045	0.0001	0.0012	0.0013	0.0001	0.03	-3.43	0.67	0.974	**0.001**	0.500	0.001 (-0.06,0.07)
Middle temporal gyrus	1786/1706	-0.0014	-0.0014	-0.0001	0.0008	0.0009	0.0001	-1.59	-1.46	-1.01	0.111	0.144	0.313	-0.05 (-0.12,0.01)
Paracentral lobule	1930/1827	-0.0005	0.0006	-0.0001	0.0009	0.0009	0.0001	-0.62	0.69	-1.66	0.534	0.493	0.098	-0.02 (-0.08,0.04)
Parahippocampal gyrus	1879/1772	-0.0025	-0.0024	0.0000	0.0016	0.0017	0.0001	-1.57	-1.37	-0.52	0.117	0.170	0.605	-0.05 (-0.12,0.01)
Pars opercularis of inferior frontal gyrus	1921/1824	0.0007	0.0013	-0.0002	0.0010	0.0010	0.0001	0.76	1.22	-3.02	0.448	0.221	**0.003**	0.02 (-0.04,0.09)
Pars orbitalis of inferior frontal gyrus	1931/1826	0.0016	0.0009	0.0000	0.0015	0.0017	0.0001	1.03	0.54	0.14	0.304	0.587	0.890	0.03 (-0.03,0.1)
Pars triangularis of inferior frontal gyrus	1923/1828	0.0001	0.0004	-0.0002	0.0010	0.0011	0.0001	0.10	0.39	-2.29	0.919	0.694	**0.022**	0.003 (-0.06,0.07)
Pericalcarine cortex	1926/1826	0.0019	0.0001	-0.0004	0.0013	0.0014	0.0001	1.45	0.06	-4.70	0.148	0.955	**2.7×10⁻⁶**	0.05 (-0.02,0.11)
Postcentral gyrus	1906/1802	-0.0012	-0.0018	0.0000	0.0007	0.0008	0.0000	-1.59	-2.27	-0.28	0.112	**0.023**	0.779	-0.05 (-0.12,0.01)
Posterior cingulate cortex	1928/1826	-0.0010	-0.0006	-0.0001	0.0010	0.0012	0.0001	-0.94	-0.50	-1.27	0.349	0.616	0.205	-0.03 (-0.09,0.03)
Precentral gyrus	1911/1816	0.0013	-0.0014	-0.0001	0.0006	0.0007	0.0000	1.93	-2.01	-1.39	0.054	**0.045**	0.165	0.06 (0,0.13)
Precuneus	1930/1825	0.0006	-0.0006	0.0000	0.0007	0.0007	0.0000	0.91	-0.90	-0.74	0.360	0.369	0.458	0.03 (-0.03,0.09)
Rostral anterior cingulate cortex	1917/1815	0.0020	0.0015	-0.0004	0.0016	0.0018	0.0001	1.26	0.84	-3.41	0.209	0.401	**0.001**	0.04 (-0.02,0.11)
Rostral middle frontal gyrus	1931/1825	-0.0001	-0.0002	-0.0001	0.0007	0.0008	0.0001	-0.19	-0.29	-2.39	0.846	0.772	0.017	-0.01 (-0.07,0.06)
Superior frontal gyrus	1925/1821	0.0005	-0.0004	-0.0001	0.0005	0.0006	0.0000	1.03	-0.72	-2.15	0.305	0.474	0.032	0.03 (-0.03,0.1)
Superior parietal cortex	1924/1826	-0.0002	-0.0008	0.0000	0.0006	0.0006	0.0000	-0.29	-1.30	0.59	0.772	0.193	0.554	-0.01 (-0.07,0.05)
Superior temporal gyrus	1743/1695	0.0009	0.0016	0.0000	0.0008	0.0009	0.0001	1.09	1.80	-0.67	0.276	0.073	0.501	0.04 (-0.03,0.1)
Supramarginal gyrus	1909/1812	-0.0010	0.0008	0.0000	0.0008	0.0008	0.0000	-1.31	1.00	0.05	0.191	0.317	0.960	-0.04 (-0.11,0.02)
Temporal pole	1877/1776	0.0006	0.0013	-0.0003	0.0019	0.0021	0.0001	0.29	0.60	-2.38	0.771	0.551	0.017	0.01 (-0.06,0.07)
Transverse temporal gyrus	1881/1780	0.0000	0.0031	-0.0001	0.0016	0.0018	0.0001	-0.03	1.77	-1.30	0.980	0.076	0.194	-0.0008 (-0.07,0.06)
Total average thickness	1932/1829	0.0001	-0.0004	-0.0001	0.0003	0.0003	0.0000	0.28	-1.52	-3.21	0.778	0.128	**0.001**	0.01 (-0.05,0.07)

P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S14 Directions of asymmetry changes in ADHD individuals versus controls for those AIs that had shown nominally significant (P<0.05) associations with diagnosis in any of the main analyses.

AI region	Mean AI ± SD in controls	Mean AI ± SD in ADHD	Cohen's *d* (95% CI) Left hemisphere	Cohen's *d* (95% CI) Right hemisphere	Controls	ADHD
Children:						
Medial orbitofrontal cortex surface area	-0.0116 ± 0.06	-0.0028 ± 0.06	-0.175 (-0.27,-0.08)	-0.32 (-0.41,-0.23)	rightward	decreased
Paracentral lobule surface area	-0.0587 ± 0.07	-0.0656 ± 0.07	-0.215 (-0.31,-0.12)	-0.115 (-0.21,-0.02)	rightward	increased
Total average surface area	-0.0025 ± 0.01	-0.0018 ± 0.01	-0.32 (-0.41,-0.23)	-0.339 (-0.43,-0.25)	rightward	decreased
Banks of superior temporal sulcus thickness	-0.0132 ± 0.04	-0.0172 ± 0.04	-0.109 (-0.2,-0.02)	0.002 (-0.09,0.09)	rightward	increased
Caudal middle frontal cortex thickness	0.0022 ± 0.03	0.0059 ± 0.03	-0.024 (-0.11,0.07)	-0.103 (-0.19,-0.01)	leftward	increased
Insula thickness	0.0036 ± 0.03	5e-04 ± 0.03	-0.146 (-0.24,-0.05)	-0.058 (-0.15,0.03)	leftward	decreased
Precentral gyrus thickness	0.0061 ± 0.02	0.0088 ± 0.02	-0.122 (-0.21,-0.03)	-0.192 (-0.28,-0.1)	leftward	increased
Adolescents:						
Pars orbitalis of inferior frontal gyrus surface	-0.1115 ± 0.06	-0.1007 ± 0.06	-0.047 (-0.19,0.1)	-0.224 (-0.37,-0.08)	rightward	decreased
Cuneus thickness	-0.0022 ± 0.03	-0.0077 ± 0.03	-0.086 (-0.23,0.06)	0.026 (-0.12,0.17)	rightward	increased
Adults:						
Globus Pallidus	0.0085 ± 0.06	0.0031 ± 0.07	-0.039 (-0.16,0.08)	0.134 (0.01,0.26)	leftward	decreased
Lateral occipital cortex surface area	0.0125 ± 0.05	0.0182 ± 0.05	0.021 (-0.09,0.14)	-0.069 (-0.18,0.05)	leftward	increased
Lateral occipital cortex thickness	-0.0141 ± 0.02	-0.012 ± 0.02	0.166 (0.05,0.28)	0.07 (-0.05,0.19)	rightward	decreased
Medial orbitofrontal cortex thickness	0.0128 ± 0.04	0.0174 ± 0.04	-0.029 (-0.14,0.09)	-0.137 (-0.25,-0.02)	leftward	increased
Middle temporal gyrus thickness	-0.0035 ± 0.02	-0.007 ± 0.02	-0.04 (-0.16,0.08)	0.05 (-0.07,0.17)	rightward	increased
Pericalcarine cortex thickness	-0.0087 ± 0.04	-0.0025 ± 0.04	0.121 (0,0.24)	-0.035 (-0.15,0.08)	rightward	decreased
Postcentral gyrus thickness	0.0065 ± 0.02	0.0031 ± 0.02	-0.009 (-0.13,0.11)	0.096 (-0.02,0.21)	leftward	decreased
Total:						
Globus Pallidus	0.0256 ± 0.06	0.0199 ± 0.06	-0.128 (-0.2,-0.06)	-0.063 (-0.13,0.01)	leftward	decreased
Medial orbitofrontal cortex surface area	-0.0067 ± 0.06	-0.0013 ± 0.06	-0.115 (-0.18,-0.05)	-0.202 (-0.27,-0.14)	rightward	decreased
Paracentral lobule surface area	-0.0611 ± 0.07	-0.0663 ± 0.06	-0.123 (-0.19,-0.06)	-0.056 (-0.12,0.01)	rightward	increased
Pars orbitalis of inferior frontal gyrus surface	-0.1072 ± 0.06	-0.1031 ± 0.06	-0.085 (-0.15,-0.02)	-0.165 (-0.23,-0.1)	rightward	decreased
Caudal middle frontal cortex thickness	0.0023 ± 0.03	0.0051 ± 0.03	-0.023 (-0.09,0.04)	-0.081 (-0.14,-0.02)	leftward	increased
Insula thickness	0.0028 ± 0.03	6e-04 ± 0.03	-0.081 (-0.14,-0.02)	-0.023 (-0.09,0.04)	leftward	decreased

The raw means and standard deviations are indicated, as well as the Cohen's *d* effect sizes for left and right hemispheric measures (i.e., when left or right hemispheric measures were analyzed separately as dependent variables). Additionally, the average direction of asymmetry in controls (derived from the raw mean AI) and its change in ADHD is shown. Positive AI values indicate leftward asymmetry, negative AI values indicate rightward asymmetry.

Table S15. Sensitivity analyses for the effects of diagnosis in all age groups combined, for subcortical volume AIs.

Subcortical volume AI	Main analysis		Non-linear age		Winsorized	
	P	*d*	*P*	*d*	*P*	*d*
Accumbens	0.321	-0.035	0.324	-0.035	0.311	-0.036
Amygdala	0.606	-0.018	0.605	-0.018	0.682	-0.014
Caudate Nucleus	0.407	0.029	0.412	0.029	0.411	0.029
Globus Pallidus	**0.010**	-0.091	**0.011**	-0.090	**0.010**	-0.091
Hippocampus	0.616	0.018	0.617	0.018	0.524	0.022
Putamen	0.263	-0.040	0.260	-0.040	0.359	-0.032
Thalamus[1]	0.146	0.053	0.149	0.053	0.137	0.055

P-values (P) and Cohen's *d* values (d) for the effects of diagnosis are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). [1]Thalamus volume was not available from the NIH dataset

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Table S16. Sensitivity analyses for the effects of diagnosis in all age groups combined, for cortical surface area AIs.

Cortical surface area AI	Main analysis		Non-linear age		Winsorized	
	P	*d*	*P*	*d*	*P*	*d*
banks of superior temporal sulcus	0.483	-0.024	0.473	-0.024	0.493	-0.023
caudal anterior cingulate cortex	0.636	-0.016	0.645	-0.015	0.630	-0.016
caudal middle frontal cortex	0.192	0.043	0.198	0.042	0.182	0.044
cuneus	0.742	-0.011	0.710	-0.012	0.771	-0.010
entorhinal cortex	0.337	-0.033	0.335	-0.033	0.372	-0.030
frontal pole	0.099	-0.054	0.100	-0.054	0.093	-0.055
fusiform gyrus	0.147	-0.048	0.152	-0.048	0.174	-0.045
inferior parietal cortex	0.435	0.026	0.416	0.027	0.437	0.026
inferior temporal gyrus	0.251	0.038	0.240	0.039	0.241	0.039
insula	0.283	0.035	0.262	0.037	0.315	0.033
isthmus cingulate cortex	0.752	-0.010	0.791	-0.009	0.853	-0.006
lateral occipital cortex	0.478	0.023	0.474	0.023	0.470	0.024
lateral orbitofrontal cortex	0.064	-0.061	0.063	-0.061	0.062	-0.061
lingual gyrus	0.917	-0.003	0.907	-0.004	0.900	0.004
medial orbitofrontal cortex	**0.029**	0.072	**0.029**	0.072	**0.027**	0.073
middle temporal gyrus	0.382	0.030	0.388	0.029	0.364	0.031
paracentral lobule	**0.029**	-0.072	**0.029**	-0.072	**0.029**	-0.072
parahippocampal gyrus	0.729	-0.012	0.735	-0.011	0.728	-0.012
pars opercularis of inferior frontal gyrus	0.340	0.031	0.336	0.032	0.338	0.032
pars orbitalis of inferior frontal gyrus	**0.021**	0.076	**0.019**	0.077	**0.019**	0.077
pars triangularis of inferior frontal gyrus	0.236	0.039	0.228	0.040	0.213	0.041
pericalcarine cortex	0.941	0.002	0.960	0.002	0.807	0.008
postcentral gyrus	0.391	0.028	0.400	0.028	0.365	0.030
posterior cingulate cortex	0.594	-0.017	0.598	-0.017	0.581	-0.018
precentral gyrus	0.087	-0.056	0.087	-0.056	0.101	-0.054
precuneus	0.464	0.024	0.458	0.024	0.389	0.028
rostral anterior cingulate cortex	0.506	-0.022	0.532	-0.021	0.500	-0.022
rostral middle frontal gyrus	0.112	-0.052	0.122	-0.051	0.123	-0.051
superior frontal gyrus	0.555	0.019	0.583	0.018	0.483	0.023
superiorparietal	0.273	0.036	0.255	0.037	0.227	0.040
superior temporal gyrus	0.620	0.017	0.642	0.016	0.496	0.023
supramarginal gyrus	0.236	-0.039	0.232	-0.039	0.268	-0.037
temporal pole	0.965	0.001	0.992	0.000	0.961	0.002
transverse temporal gyrus	0.931	0.003	0.946	0.002	0.830	0.007
total average surface area	0.540	0.020	0.532	0.020	0.147	0.048

P-values (P) and Cohen's *d* values (d) for the effects of diagnosis are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S17. Sensitivity analyses for the effects of diagnosis in all age groups combined, for cortical thickness AIs.

Cortical thickness AI	Main analysis		Non-linear age		Winsorized	
	P	d	P	d	P	d
banks of superior temporal sulcus	0.058	-0.064	0.059	-0.064	0.060	-0.064
caudal anterior cingulate cortex	0.108	0.053	0.105	0.053	0.105	0.053
caudal middle frontal cortex	**0.027**	0.073	**0.026**	0.073	**0.027**	0.073
cuneus	0.563	0.019	0.555	0.019	0.566	0.019
entorhinal cortex	0.261	-0.038	0.263	-0.038	0.273	-0.037
frontal pole	0.344	0.031	0.345	0.031	0.337	0.032
fusiform gyrus	0.938	-0.003	0.932	-0.003	0.972	-0.001
inferior parietal cortex	0.810	0.008	0.801	0.008	0.813	0.008
inferior temporal gyrus	0.691	-0.013	0.683	-0.014	0.694	-0.013
insula	**0.049**	-0.065	0.050	-0.065	0.061	-0.062
isthmus cingulate cortex	0.909	-0.004	0.869	-0.005	0.914	-0.004
lateral occipital cortex	0.410	0.027	0.418	0.027	0.405	0.027
lateral orbitofrontal cortex	0.419	0.027	0.417	0.027	0.431	0.026
lingual gyrus	0.290	-0.035	0.280	-0.036	0.308	-0.034
medial orbitofrontal cortex	0.974	0.001	0.979	0.001	0.962	0.002
middle temporal gyrus	0.111	-0.054	0.113	-0.054	0.130	-0.052
paracentral lobule	0.534	-0.020	0.549	-0.020	0.534	-0.020
parahippocampal gyrus	0.117	-0.052	0.114	-0.053	0.116	-0.052
pars opercularis of inferior frontal gyrus	0.448	0.025	0.429	0.026	0.424	0.026
pars orbitalis of inferior frontal gyrus	0.304	0.034	0.293	0.034	0.306	0.034
pars triangularis of inferior frontal gyrus	0.919	0.003	0.898	0.004	0.835	0.007
pericalcarine cortex	0.148	0.048	0.140	0.048	0.145	0.048
postcentral gyrus	0.112	-0.053	0.110	-0.053	0.113	-0.052
posterior cingulate cortex	0.349	-0.031	0.344	-0.031	0.370	-0.029
precentral gyrus	0.054	0.064	0.053	0.064	0.050	0.065
precuneus	0.360	0.030	0.366	0.030	0.366	0.030
rostral anterior cingulate cortex	0.209	0.041	0.206	0.042	0.216	0.041
rostral middle frontal gyrus	0.846	-0.006	0.855	-0.006	0.834	-0.007
superior frontal gyrus	0.305	0.034	0.298	0.034	0.354	0.030
superiorparietal	0.772	-0.010	0.779	-0.009	0.783	-0.009
superior temporal gyrus	0.276	0.037	0.278	0.037	0.225	0.042
supramarginal gyrus	0.191	-0.043	0.192	-0.043	0.216	-0.041
temporal pole	0.771	0.010	0.748	0.011	0.751	0.011
transverse temporal gyrus	0.980	-0.001	0.963	-0.002	0.992	0.0003
total average thickness	0.778	0.009	0.776	0.009	0.815	0.008

P-values (P) and Cohen's *d* values (d) for the effects of diagnosis are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S18. Associations of subcortical volume AIs with disorder severity in ADHD individuals, all age groups combined.

Region	Hyperactivity/impulsivity				Inattention			
	N subjects	Ndtst	p-value	t-value	N subjects	Ndtst	p-value	t-value
Accumbens	281	6	0.540	0.613	281	6	0.363	0.912
Amygdala	282	6	0.830	0.215	282	6	0.932	0.085
Caudate Nucleus	281	6	0.306	1.026	281	6	0.830	0.215
Globus Pallidus	283	6	0.964	0.045	283	6	0.668	0.429
Hippocampus	281	6	0.431	0.788	281	6	0.565	-0.577
Putamen	282	6	0.520	0.644	282	6	0.408	0.829
Thalamus[1]	280	6	0.125	-1.538	280	6	0.396	-0.851

P-values (P) and t-values (t) for the effects of ADHD severity, as measured by hyperactivity/impulsivity and inattention symptoms, are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). [1]Thalamus volume was not available from the NIH dataset

Table S19. Associations of cortical surface area AIs with disorder severity in ADHD individuals, all age groups combined.

Region	Hyperactivity/impulsivity				Inattention			
	N subjects	Ndtst	p-value	t-value	N subjects	Ndtst	p-value	t-value
banks of superior temporal sulcus	286	7	0.971	-0.036	286	7	0.352	0.931
caudal anterior cingulate cortex	322	7	0.157	1.420	322	7	0.901	0.125
caudal middle frontal cortex	322	7	0.301	-1.037	322	7	0.552	-0.596
cuneus	322	7	0.112	1.595	322	7	0.865	-0.170
entorhinal cortex	320	7	**0.035**	2.123	320	7	0.066	1.846
frontal pole	322	7	0.687	-0.403	322	7	0.921	-0.099
fusiform gyrus	322	7	0.600	0.525	322	7	0.283	1.075
inferior parietal cortex	321	7	0.313	-1.010	321	7	0.757	-0.310
inferior temporal gyrus	321	7	0.255	-1.139	321	7	0.428	0.794
insula	322	7	0.905	-0.120	322	7	0.160	1.408
isthmus cingulate cortex	321	7	0.694	-0.393	321	7	0.087	-1.715
lateral occipital cortex	321	7	0.646	0.460	321	7	0.720	0.359
lateral orbitofrontal cortex	322	7	0.180	1.343	322	7	0.169	1.379
lingual gyrus	322	7	0.443	-0.768	322	7	0.838	0.205
medial orbitofrontal cortex	321	7	0.624	0.490	321	7	0.674	0.422
middle temporal gyrus	308	7	0.919	0.102	308	7	0.243	-1.169
paracentral lobule	322	7	0.585	-0.547	322	7	0.179	1.347
parahippocampal gyrus	322	7	0.646	-0.459	322	7	0.206	1.267
pars opercularis of inferior frontal gyrus	322	7	0.473	-0.719	322	7	0.165	-1.393
pars orbitalis of inferior frontal gyrus	322	7	0.284	1.072	322	7	0.286	1.069
pars triangularis of inferior frontal gyrus	322	7	0.816	-0.233	322	7	0.832	-0.212
pericalcarine cortex	322	7	0.992	0.010	322	7	0.754	-0.313
postcentral gyrus	321	7	0.773	-0.289	321	7	0.328	0.980
posterior cingulate cortex	321	7	0.516	-0.650	321	7	0.493	-0.686
precentral gyrus	322	7	0.937	-0.079	322	7	0.135	1.497
precuneus	321	7	0.548	0.602	321	7	0.382	-0.876
rostral anterior cingulate cortex	321	7	0.330	0.976	321	7	0.550	0.598
rostral middle frontal gyrus	322	7	0.848	-0.191	322	7	0.828	0.217
superior frontal gyrus	322	7	0.067	-1.839	322	7	0.125	1.540
superiorparietal	322	7	0.622	0.494	322	7	0.119	-1.561
superior temporal gyrus	291	7	0.182	1.337	291	7	0.507	0.664
supramarginal gyrus	314	7	0.411	0.823	314	7	0.806	-0.246
temporal pole	321	7	0.615	0.503	321	7	0.383	0.873
transverse temporal gyrus	322	7	0.637	-0.472	322	7	0.067	-1.836
total average surface area	322	7	0.812	-0.238	322	7	0.430	0.791

P-values (P) and t-values (t) for the effects of ADHD severity, as measured by hyperactivity/impulsivity and inattention symptoms, are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S20. Associations of cortical thickness AIs with disorder severity in ADHD individuals, all age groups combined.

Region	Hyperactivity/impulsivity				Inattention			
	N subjects	Ndtst	p-value	t-value	N subjects	Ndtst	p-value	t-value
banks of superior temporal sulcus	286	7	0.784	-0.274	286	7	0.802	0.250
caudal anterior cingulate cortex	322	7	**0.008**	2.655	322	7	0.305	1.027
caudal middle frontal cortex	321	7	0.083	1.741	321	7	0.799	-0.255
cuneus	322	7	0.736	0.337	322	7	0.707	0.376
entorhinal cortex	321	7	0.684	-0.407	321	7	0.624	0.490
frontal pole	321	7	0.372	0.895	321	7	0.792	0.264
fusiform gyrus	322	7	0.447	-0.762	322	7	0.849	0.191
inferior parietal cortex	321	7	0.824	-0.222	321	7	0.301	-1.035
inferior temporal gyrus	321	7	0.793	0.263	321	7	0.393	0.855
insula	322	7	0.764	-0.301	322	7	0.082	-1.744
isthmus cingulate cortex	321	7	0.990	0.013	321	7	0.468	-0.726
lateral occipital cortex	321	7	0.645	0.462	321	7	0.633	-0.479
lateral orbitofrontal cortex	322	7	0.740	0.332	322	7	0.596	-0.531
lingual gyrus	322	7	0.584	-0.549	322	7	0.576	-0.559
medial orbitofrontal cortex	322	7	0.109	1.605	322	7	0.942	0.073
middle temporal gyrus	308	7	0.832	-0.212	308	7	0.810	-0.241
paracentral lobule	322	7	0.110	1.603	322	7	0.744	0.327
parahippocampal gyrus	322	7	0.970	-0.037	322	7	0.907	-0.117
pars opercularis of inferior frontal gyrus	322	7	**0.035**	2.121	322	7	**0.042**	2.041
pars orbitalis of inferior frontal gyrus	322	7	0.081	-1.750	322	7	0.437	-0.778
pars triangularis of inferior frontal gyrus	320	7	0.311	1.016	320	7	0.083	1.740
pericalcarine cortex	322	7	**0.017**	2.410	322	7	0.311	1.015
postcentral gyrus	321	7	0.494	-0.684	321	7	0.137	1.490
posterior cingulate cortex	320	7	0.272	1.101	320	7	0.275	1.093
precentral gyrus	322	7	0.482	0.705	322	7	0.387	-0.867
precuneus	321	7	0.209	1.260	321	7	0.493	0.687
rostral anterior cingulate cortex	321	7	0.766	-0.298	321	7	0.481	0.705
rostral middle frontal gyrus	322	7	0.346	0.944	322	7	0.762	0.303
superior frontal gyrus	322	7	0.139	1.482	322	7	0.587	-0.543
superiorparietal	322	7	0.872	-0.162	322	7	0.450	-0.757
superior temporal gyrus	291	7	0.778	-0.283	291	7	0.352	0.932
supramarginal gyrus	314	7	0.457	-0.745	314	7	0.805	0.247
temporal pole	321	7	0.283	-1.076	321	7	0.975	-0.031
transverse temporal gyrus	322	7	0.311	1.014	322	7	0.173	1.367
total average thickness	322	7	0.113	1.591	322	7	0.486	0.697

P-values (P) and t-values (t) for the effects of ADHD severity, as measured by hyperactivity/impulsivity and inattention symptoms, are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S21. Associations of subcortical volume AIs with psychostimulant medication use in ADHD individuals, all age groups combined.

Region	Lifetime medication use				Current medication use			
	N subjects (no/yes)	N datasets	p-value	t-value	N subjects (no/yes)	N datasets	p-value	t-value
Accumbens	183/268	7	0.406	-0.831	320/318	13	0.951	0.062
Amygdala	182/268	7	0.459	0.742	319/318	13	0.534	0.623
Caudate Nucleus	183/268	7	0.359	-0.919	320/318	13	0.793	0.263
Globus Pallidus	183/268	7	0.517	-0.648	320/318	13	0.089	1.701
Hippocampus	182/267	7	0.834	0.210	320/317	13	0.715	0.365
Putamen	183/268	7	0.306	-1.024	320/318	13	0.075	1.785
Thalamus[1]	182/267	7	0.406	0.832	290/235	12	0.985	-0.019

P-values (P) and t-values (t) for the effects of current and lifetime psychostimulant medication use are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). [1]Thalamus volume was not available from the NIH dataset

Table S22. Associations of cortical surface area AIs with psychostimulant medication use in ADHD individuals, all age groups combined.

Region	Lifetime medication use				Current medication use			
	N subjects (no/yes)	N datasets	p-value	t-value	N subjects (no/yes)	N datasets	p-value	t-value
banks of superior temporal sulcus	177/310	9	0.148	1.451	349/337	15	0.308	-1.019
caudal anterior cingulate cortex	188/335	9	0.134	1.501	377/359	15	0.293	1.053
caudal middle frontal cortex	188/337	9	0.837	0.206	377/361	15	0.169	-1.376
cuneus	186/337	9	0.604	0.520	374/358	15	0.745	0.325
entorhinal cortex	176/335	9	0.484	-0.701	366/337	14	0.753	-0.315
frontal pole	188/337	9	0.674	0.421	377/361	15	0.870	0.164
fusiform gyrus	187/335	9	0.978	-0.027	376/359	15	0.965	-0.044
inferior parietal cortex	186/335	9	0.989	-0.013	375/361	15	0.939	-0.077
inferior temporal gyrus	187/301	9	0.837	0.206	361/339	15	0.074	1.791
insula	179/336	9	**0.043**	-2.026	377/360	15	0.068	-1.825
isthmus cingulate cortex	188/337	9	0.268	1.110	377/360	15	0.276	-1.091
lateral occipital cortex	186/337	9	0.611	-0.509	377/361	15	0.982	-0.022
lateral orbitofrontal cortex	188/337	9	0.814	-0.235	376/361	15	0.605	-0.517
lingual gyrus	187/337	9	0.750	0.319	377/361	15	0.243	-1.168
medial orbitofrontal cortex	187/337	9	0.415	0.816	374/357	15	0.085	1.726
middle temporal gyrus	183/285	9	0.598	0.527	344/327	15	0.095	1.670
paracentral lobule	188/336	9	0.488	-0.694	377/361	15	0.584	0.547
parahippocampal gyrus	188/337	9	0.282	1.076	377/359	15	0.362	0.911
pars opercularis of inferior frontal gyrus	188/334	9	0.318	0.999	376/356	15	0.996	0.005
pars orbitalis of inferior frontal gyrus	187/337	9	0.543	0.609	377/361	15	0.061	1.874
pars triangularis of inferior frontal gyrus	188/337	9	0.098	1.657	377/358	15	0.943	-0.072
pericalcarine cortex	187/336	9	0.999	-0.001	376/359	15	0.949	-0.064
postcentral gyrus	180/337	9	0.294	-1.050	370/354	15	0.987	-0.016
posterior cingulate cortex	188/337	9	0.868	-0.166	377/360	15	0.765	-0.299
precentral gyrus	183/335	9	0.344	0.948	373/351	15	0.284	1.072
precuneus	187/337	9	0.972	-0.035	377/361	15	**0.025**	-2.251
rostral anterior cingulate cortex	187/334	9	**0.049**	1.972	372/357	15	0.257	1.135
rostral middle frontal gyrus	188/337	9	0.830	-0.214	377/360	15	0.084	-1.728
superior frontal gyrus	188/335	9	0.617	0.500	376/358	15	0.723	0.355
superiorparietal	185/336	9	0.282	1.078	375/360	15	0.187	-1.320
superior temporal gyrus	179/276	9	0.620	0.496	336/317	15	0.099	1.651
supramarginal gyrus	184/333	9	**0.038**	-2.082	374/353	15	0.507	-0.664
temporal pole	188/337	9	0.700	-0.386	377/360	15	0.401	-0.840
transverse temporal gyrus	188/337	9	0.182	-1.335	377/361	15	**0.020**	-2.336
total average surface area	188/337	9	0.919	0.102	377/361	15	0.140	-1.477

P-values (P) and t-values (t) for the effects of current and lifetime psychostimulant medication use are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S23. Associations of cortical thickness AIs with psychostimulant medication use in ADHD individuals, all age groups combined.

Region	Lifetime medication use				Current medication use			
	N subjects (no/yes)	N datasets	p-value	t-value	N subjects (no/yes)	N datasets	p-value	t-value
banks of superior temporal sulcus	177/310	9	0.259	-1.131	349/337	15	0.479	0.709
caudal anterior cingulate cortex	188/335	9	0.894	-0.133	377/359	15	0.940	-0.076
caudal middle frontal cortex	188/337	9	0.237	-1.183	376/361	15	0.811	0.239
cuneus	187/337	9	0.871	0.162	375/358	15	0.773	0.288
entorhinal cortex	176/335	9	0.953	0.059	366/337	14	0.497	-0.679
frontal pole	188/337	9	0.801	0.252	377/361	15	0.620	0.496
fusiform gyrus	188/336	9	0.626	0.488	377/360	15	0.257	-1.134
inferior parietal cortex	186/335	9	0.380	0.879	375/361	15	0.020	-2.332
inferior temporal gyrus	187/301	9	0.699	-0.386	361/339	15	0.397	-0.847
insula	179/336	9	0.724	0.353	377/360	15	0.845	0.196
isthmus cingulate cortex	188/337	9	0.998	-0.002	377/360	15	0.138	1.483
lateral occipital cortex	186/337	9	0.422	0.803	377/361	15	0.315	1.005
lateral orbitofrontal cortex	188/337	9	0.281	1.078	376/361	15	0.942	0.073
lingual gyrus	187/337	9	0.928	-0.091	377/361	15	0.617	0.500
medial orbitofrontal cortex	187/337	9	0.282	-1.077	374/357	15	0.417	0.813
middle temporal gyrus	184/285	9	0.491	0.689	345/327	15	0.485	0.699
paracentral lobule	188/336	9	0.032	2.152	377/361	15	0.552	0.596
parahippocampal gyrus	188/336	9	0.384	0.872	377/358	15	0.726	-0.350
pars opercularis of inferior frontal gyrus	188/334	9	0.251	1.149	376/356	15	0.380	0.878
pars orbitalis of inferior frontal gyrus	187/337	9	0.753	-0.314	377/361	15	0.642	-0.466
pars triangularis of inferior frontal gyrus	188/337	9	0.937	-0.079	375/358	15	0.940	-0.075
pericalcarine cortex	187/336	9	0.868	0.167	376/359	15	0.086	1.721
postcentral gyrus	181/336	9	0.587	-0.543	371/353	15	0.988	0.015
posterior cingulate cortex	188/337	9	0.460	-0.740	376/360	15	0.868	0.166
precentral gyrus	183/335	9	0.258	-1.131	373/351	15	**0.031**	-2.157
precuneus	187/337	9	0.466	0.729	377/361	15	0.605	0.517
rostral anterior cingulate cortex	187/334	9	0.656	-0.445	372/357	15	0.511	-0.658
rostral middle frontal gyrus	188/337	9	0.840	-0.202	377/360	15	0.378	0.882
superior frontal gyrus	188/335	9	0.704	-0.380	376/358	15	0.911	-0.112
superiorparietal	185/336	9	0.761	-0.304	375/360	15	0.740	0.332
superior temporal gyrus	179/276	9	0.287	-1.066	336/317	15	0.171	1.369
supramarginal gyrus	184/333	9	0.789	0.268	374/353	15	0.502	-0.672
temporal pole	188/337	9	0.861	0.176	377/360	15	0.901	-0.124
transverse temporal gyrus	188/337	9	0.207	1.265	377/361	15	0.796	0.259
total average thickness	188/337	9	0.676	0.419	377/361	15	0.801	0.253

P-values (P) and t-values (t) for the effects of current and lifetime psychostimulant medication use are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text)

Table S24 Associations of subcortical volume AIs with comorbidities in ADHD individuals, all age groups combined.

	Mood				ODD				Anxiety				SUD			
	N subj (no/yes)	N dtst	p-value	t-value	N subj (no/yes)	N dtst	p-value	t-value	N subj (no/yes)	N dtst	p-value	t-value	N subj (no/yes)	N dtst	p-value	t-value
Accumbens	268/164	8	0.58	0.55	81/39	6	0.251	1.154	388/66	9	0.664	0.435	252/67	6	0.492	0.688
Amygdala	266/164	8	0.75	0.32	81/39	6	0.316	-1.007	386/66	9	0.276	1.090	252/67	6	0.325	-0.985
Caudate Nucleus	268/164	8	0.48	0.71	81/39	6	0.249	-1.158	388/66	9	0.173	-1.364	252/65	6	0.105	-1.624
Globus Pallidus	268/164	8	0.67	0.42	81/39	6	0.605	0.519	388/66	9	0.978	-0.028	252/67	6	0.583	0.550
Hippocampus	267/164	8	0.94	0.08	81/39	6	0.307	-1.027	387/66	9	0.918	-0.103	252/67	6	0.416	-0.814
Putamen	268/164	8	0.11	-1.61	81/39	6	0.618	-0.501	388/66	9	0.669	-0.428	252/66	6	0.658	-0.444
Thalamus[1]	266/164	8	0.81	-0.24	81/39	6	0.419	-0.812	386/66	9	0.486	0.697	251/65	6	0.548	0.602

P-values (P) and t-values (t) for the effects of ADHD comorbidities are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). [1]Thalamus volume was not available from the NIH dataset. subj=subjects; dtst=dataset

Table S25. Associations of cortical surface area AIs with comorbidities in ADHD individuals, all age groups combined

	Mood				ODD				Anxiety				SUD			
	N subj (no/yes)	N dtst	p-value	t-value	N subj (no/yes)	N dtst	p-value	t-value	N subj (no/yes)	N dtst	p-value	t-value	N subj (no/yes)	N dtst	p-value	t-value
banks of superior temporal sulcus	378/174	8	0.422	0.804	145/78	6	0.411	-0.824	493/81	9	0.786	0.272	331/75	6	0.111	1.599
caudal anterior cingulate cortex	383/178	8	0.154	-1.427	151/78	6	0.302	-1.034	501/82	9	0.301	-1.035	333/77	6	0.797	-0.257
caudal middle frontal cortex	384/179	8	0.814	-0.235	151/80	6	0.453	0.751	503/82	9	0.080	1.757	335/77	6	0.647	0.458
cuneus	383/178	8	0.086	1.718	149/79	6	0.849	0.191	501/82	9	0.212	1.249	335/76	6	0.857	0.181
entorhinal cortex	344/157	8	0.128	1.525	127/76	6	0.523	-0.639	443/77	9	0.115	1.578	295/69	6	0.335	0.965
frontal pole	384/179	8	0.935	0.081	151/80	6	0.466	-0.730	503/82	9	0.256	1.138	335/77	6	0.793	0.262
fusiform gyrus	355/158	8	0.699	-0.386	148/78	6	0.792	-0.264	455/77	9	0.152	1.436	294/70	6	0.412	-0.821
inferior parietal cortex	383/176	8	0.742	-0.330	150/80	6	0.139	-1.484	500/81	9	0.928	-0.091	334/74	6	0.768	-0.296
inferior temporal gyrus	357/159	8	**0.046**	2.003	150/77	6	0.074	1.795	458/77	9	0.484	0.700	295/70	6	0.883	0.147
insula	377/176	8	0.885	0.145	149/78	6	0.785	-0.273	422/81	9	0.714	-0.367	335/76	6	0.718	0.362
isthmus cingulate cortex	384/179	8	0.262	-1.123	151/79	6	0.689	-0.400	503/82	9	0.686	0.404	335/77	6	0.316	1.003
lateral occipital cortex	383/177	8	0.863	-0.173	151/80	6	0.493	-0.687	500/82	9	0.296	-1.046	335/74	6	0.502	0.673
lateral orbitofrontal cortex	383/179	8	0.185	1.328	150/80	6	0.627	0.486	502/82	9	0.968	0.041	334/77	6	0.713	0.368
lingual gyrus	356/159	8	0.438	-0.776	151/80	6	0.153	-1.434	458/79	9	0.227	-1.209	295/69	6	0.531	0.628
medial orbitofrontal cortex	382/179	8	0.564	-0.577	149/79	6	0.779	-0.281	501/82	9	0.934	-0.083	335/76	6	0.127	1.531
middle temporal gyrus	353/155	8	0.714	0.367	147/74	6	0.746	-0.324	451/76	9	0.726	-0.350	290/68	6	0.989	0.014
paracentral lobule	383/179	8	0.326	-0.982	151/80	6	0.070	1.823	503/81	9	0.990	-0.013	334/77	6	0.061	1.879
parahippocampal gyrus	357/158	8	0.319	-0.997	149/77	6	0.358	0.921	458/76	9	0.108	1.609	295/70	6	0.763	-0.301
pars opercularis of inferior frontal gyrus	381/178	8	0.400	0.843	145/79	6	0.933	-0.084	499/82	9	0.566	0.575	331/77	6	0.673	-0.423
pars orbitalis of inferior frontal gyrus	383/179	8	0.845	-0.195	151/80	6	0.843	0.198	502/82	9	0.179	1.345	334/77	6	0.450	0.757
pars triangularis of inferior frontal gyrus	384/179	8	0.826	-0.220	147/79	6	0.152	-1.436	503/82	9	0.852	-0.187	335/77	6	0.323	0.989
pericalcarine cortex	382/179	8	0.194	1.299	148/80	6	0.481	-0.706	501/82	9	0.958	0.052	334/76	6	0.943	0.072
postcentral gyrus	379/176	8	0.683	0.408	149/75	6	0.970	-0.038	421/81	9	0.778	-0.282	334/77	6	**0.006**	2.777
posterior cingulate cortex	384/179	8	0.357	0.922	149/80	6	0.322	-0.992	503/82	9	0.166	-1.386	335/77	6	0.272	-1.100
precentral gyrus	379/177	8	0.498	0.678	146/78	6	0.807	0.244	419/81	9	0.277	-1.088	331/77	6	0.945	-0.069
precuneus	383/179	8	0.900	0.125	151/80	6	0.754	0.314	502/82	9	0.975	-0.032	335/76	6	0.833	-0.211

rostral anterior cingulate cortex	381/177	8	**0.029**	-2.186	148/78	6	0.512	-0.657	500/80	9	0.388	-0.865	332/75	6	0.628	-0.485
rostral middle frontal gyrus	384/179	8	0.583	0.550	150/80	6	0.194	-1.303	503/82	9	0.879	0.152	335/77	6	0.053	-1.944
superior frontal gyrus	383/178	8	0.988	-0.015	150/79	6	0.066	1.850	501/82	9	0.252	-1.147	333/77	6	0.447	0.761
superiorparietal	382/177	8	0.869	-0.165	150/79	6	0.585	0.547	500/81	9	0.784	0.274	334/74	6	0.442	-0.769
superior temporal gyrus	352/151	8	0.195	-1.297	147/76	6	0.521	-0.642	446/76	9	0.682	0.410	288/67	6	0.375	-0.889
supramarginal gyrus	382/176	8	0.618	-0.499	151/79	6	0.280	-1.084	498/82	9	0.165	1.390	334/76	6	**0.033**	-2.144
temporal pole	357/159	8	0.984	0.020	150/77	6	**0.037**	2.103	458/77	9	0.821	0.226	295/70	6	0.206	1.268
transverse temporal gyrus	357/159	8	0.633	-0.478	150/78	6	0.674	-0.422	458/77	9	0.658	0.443	295/70	6	0.230	-1.203
total average surface area	384/179	8	0.865	0.170	151/80	6	0.687	-0.404	503/82	9	0.601	0.524	335/77	6	0.372	0.894

P-values (P) and t-values (t) for the effects of ADHD comorbidities are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). subj=subjects; dtst=dataset

Table S26. Associations of cortical thickness AIs with comorbidities in ADHD individuals, all age groups combined.

	Mood				ODD				Anxiety				SUD			
	N subj (no/yes)	N dtst	p-value	t-value	N subj (no/yes)	N dtst	p-value	t-value	N subj (no/yes)	N dtst	p-value	t-value	N subj (no/yes)	N dtst	p-value	t-value
banks of superior temporal sulcus	378/174	8	0.633	-0.478	145/78	6	0.219	1.233	493/81	9	0.364	-0.909	331/75	6	0.407	0.83
caudal anterior cingulate cortex	383/178	8	0.584	-0.548	151/78	6	0.558	0.586	501/82	9	0.553	0.593	333/77	6	0.298	-1.042
caudal middle frontal cortex	383/179	8	0.295	1.049	151/79	6	0.192	1.309	502/82	9	0.395	0.852	335/77	6	0.92	-0.101
cuneus	383/179	8	0.979	0.026	149/79	6	0.745	0.326	502/82	9	**0.019**	2.358	335/76	6	**0.007**	2.7
entorhinal cortex	345/157	8	**0.004**	-2.891	128/76	6	0.451	-0.755	444/77	9	0.794	-0.261	295/69	6	0.951	-0.061
frontal pole	384/179	8	0.77	-0.292	151/80	6	0.579	0.555	503/82	9	0.105	-1.622	335/77	6	0.164	1.395
fusiform gyrus	357/158	8	0.555	0.591	148/78	6	0.207	-1.265	457/77	9	0.241	1.173	294/70	6	0.692	0.396
inferior parietal cortex	383/176	8	0.196	1.295	150/80	6	0.963	0.046	500/81	9	0.705	-0.379	334/74	6	0.515	-0.652
inferior temporal gyrus	357/159	8	0.902	0.123	150/77	6	0.671	-0.425	458/77	9	0.433	-0.785	295/70	6	0.538	-0.616
insula	377/176	8	0.487	-0.695	149/78	6	0.209	-1.26	422/81	9	0.961	-0.049	335/76	6	0.437	-0.779
isthmus cingulate cortex	384/179	8	0.928	0.091	151/79	6	0.736	0.337	503/82	9	0.605	-0.517	335/77	6	0.749	-0.321
lateral occipital cortex	383/177	8	0.441	-0.771	151/80	6	0.66	-0.441	500/82	9	**0.016**	-2.413	335/74	6	0.309	1.019
lateral orbitofrontal cortex	383/179	8	0.76	0.305	150/80	6	0.295	-1.05	502/82	9	0.482	0.703	334/77	6	0.234	1.193
lingual gyrus	356/159	8	0.296	1.047	151/80	6	0.17	-1.376	458/79	9	0.253	-1.145	295/69	6	0.734	0.34
medial orbitofrontal cortex	383/179	8	0.503	0.67	150/79	6	**0.029**	-2.195	502/82	9	0.056	-1.914	335/76	6	0.522	-0.641
middle temporal gyrus	354/155	8	0.345	0.945	147/74	6	0.917	-0.104	452/76	9	0.406	-0.832	290/68	6	0.78	-0.28
paracentral lobule	383/179	8	0.495	-0.683	151/80	6	0.794	0.261	503/81	9	0.060	1.882	334/77	6	**0.047**	1.991
parahippocampal gyrus	356/159	8	0.192	1.305	149/78	6	0.551	0.598	458/77	9	0.158	1.413	295/70	6	0.258	1.133
pars opercularis of inferior frontal gyrus	381/178	8	0.805	-0.246	145/79	6	0.807	0.245	499/82	9	0.965	-0.044	331/77	6	0.131	1.512
pars orbitalis of inferior frontal gyrus	383/179	8	0.511	0.657	151/80	6	0.434	0.784	502/82	9	0.952	-0.060	334/77	6	0.309	1.018
pars triangularis of inferior frontal gyrus	383/178	8	**0.027**	2.221	147/77	6	0.353	0.931	501/82	9	0.401	0.840	335/77	6	0.389	-0.862
pericalcarine cortex	382/179	8	**0.046**	1.997	148/80	6	0.632	-0.48	501/82	9	0.990	0.013	334/76	6	0.429	-0.792
postcentral gyrus	379/176	8	0.409	-0.826	149/75	6	0.235	1.192	421/81	9	0.822	0.225	334/77	6	0.053	1.944
posterior cingulate cortex	383/179	8	0.076	1.777	149/79	6	0.1	1.651	502/82	9	0.929	0.090	335/77	6	0.601	0.524
precentral gyrus	379/177	8	0.742	0.33	146/78	6	0.563	0.579	419/81	9	0.953	0.059	331/77	6	0.465	-0.732
precuneus	383/179	8	**0.024**	-2.264	151/80	6	0.617	0.501	502/82	9	0.236	-1.185	335/76	6	0.09	1.702

rostral anterior cingulate cortex	381/177	8	0.05	1.962	148/78	6	0.626	-0.488	500/80	9	0.478	-0.710	332/75	6	0.117	-1.571
rostral middle frontal gyrus	384/179	8	***0.0002***	3.702	150/80	6	0.365	0.908	503/82	9	0.780	0.280	335/77	6	0.373	0.891
superior frontal gyrus	383/178	8	0.985	-0.018	150/79	6	0.68	-0.414	501/82	9	0.838	0.204	333/77	6	0.586	-0.546
superiorparietal	382/177	8	0.578	0.557	150/79	6	0.083	1.742	500/81	9	0.730	-0.345	334/74	6	0.381	0.878
superior temporal gyrus	352/151	8	0.847	0.193	147/76	6	0.329	0.979	446/76	9	0.184	-1.332	288/67	6	0.625	0.489
supramarginal gyrus	382/176	8	0.679	0.415	151/79	6	0.232	1.198	498/82	9	0.117	1.568	334/76	6	0.402	-0.838
temporal pole	357/159	8	0.921	-0.099	150/77	6	0.263	-1.122	458/77	9	0.197	-1.292	295/70	6	0.715	-0.366
transverse temporal gyrus	357/159	8	**0.036**	2.101	150/78	6	0.748	0.322	458/77	9	0.976	-0.030	295/70	6	0.376	0.887
total average thickness	384/179	8	0.109	1.608	151/80	6	0.669	0.428	503/82	9	0.600	-0.524	335/77	6	0.642	0.465

P-values (P) and t-values (t) for the effects of ADHD comorbidities are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). subj=subjects; dtst=dataset.

Table S27. Associations of subcortical volume AIs with IQ in all age groups combined.

Region	IQ cases			IQ controls		
	N subjects	p-value	t-value	N subjects	p-value	t-value
Accumbens	1508	**0.031**	2.162	1386	0.772	-0.290
Amygdala	1507	0.277	1.087	1385	0.132	1.507
Caudate Nucleus	1508	0.410	0.824	1386	0.670	-0.427
Globus Pallidus	1510	0.619	0.497	1382	0.074	-1.790
Hippocampus	1507	**0.039**	-2.063	1382	0.661	0.439
Putamen	1509	0.282	1.076	1376	0.233	1.193
Thalamus[1]	1405	0.294	-1.051	1273	0.405	-0.834

P-values (P) and t-values (t) for the effects of IQ in cases and controls are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text). [1]Thalamus volume was not available from the NIH dataset.

Table S28. Associations of cortical surface area AIs with IQ in all age groups combined.

Region	IQ cases			IQ controls		
	N subjects	p-value	t-value	N subjects	p-value	t-value
banks of superior temporal sulcus	1637	0.867	0.167	1541	0.448	0.759
caudal anterior cingulate cortex	1738	0.511	0.658	1631	0.877	0.155
caudal middle frontal cortex	1743	0.072	1.802	1635	0.072	-1.800
cuneus	1736	0.864	-0.172	1636	0.145	1.458
entorhinal cortex	1634	0.615	0.503	1530	0.532	0.625
frontal pole	1743	0.701	0.384	1638	0.622	0.493
fusiform gyrus	1688	0.914	-0.108	1587	0.264	-1.118
inferior parietal cortex	1735	0.304	1.028	1628	0.743	-0.327
inferior temporal gyrus	1654	0.869	-0.165	1575	0.465	-0.730
insula	1732	0.931	-0.087	1625	0.913	-0.110
isthmus cingulate cortex	1741	0.508	0.662	1631	0.402	0.839
lateral occipital cortex	1739	**0.030**	-2.174	1638	0.342	-0.950
lateral orbitofrontal cortex	1742	0.169	-1.376	1638	0.333	-0.969
lingual gyrus	1695	0.727	-0.349	1590	0.159	1.408
medial orbitofrontal cortex	1732	0.493	0.686	1629	0.621	-0.495
middle temporal gyrus	1597	0.253	1.144	1516	**0.012**	-2.521
paracentral lobule	1741	0.728	-0.348	1637	0.396	-0.849
parahippocampal gyrus	1690	0.239	-1.178	1581	0.095	-1.669
pars opercularis of inferior frontal gyrus	1733	0.520	-0.643	1634	0.381	0.876
pars orbitalis of inferior frontal gyrus	1742	0.579	-0.555	1636	0.770	0.293
pars triangularis of inferior frontal gyrus	1737	0.375	0.887	1638	0.062	1.864
pericalcarine cortex	1739	0.090	-1.696	1637	0.340	0.955
postcentral gyrus	1721	0.780	-0.280	1611	0.919	0.102
posterior cingulate cortex	1740	0.568	0.571	1633	0.966	0.043
precentral gyrus	1725	0.153	1.431	1628	0.857	0.180
precuneus	1741	0.571	-0.567	1635	0.851	-0.188
rostral anterior cingulate cortex	1728	0.817	-0.231	1627	0.806	0.245
rostral middle frontal gyrus	1742	0.389	-0.862	1634	0.955	-0.056
superior frontal gyrus	1736	0.058	-1.894	1631	0.604	-0.519
superiorparietal	1735	0.578	0.556	1636	0.990	0.013
superior temporal gyrus	1556	0.335	-0.965	1504	0.446	0.762
supramarginal gyrus	1720	0.244	1.164	1620	0.578	0.556
temporal pole	1690	0.856	0.182	1587	0.319	-0.996
transverse temporal gyrus	1693	0.791	-0.265	1590	0.431	0.787
total average surface area	1743	0.560	-0.583	1639	0.627	-0.485

P-values (P) and t-values (t) for the effects of IQ in cases and controls are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).

Table S29. Associations of cortical thickness AIs with IQ in all age groups combined.

Region	IQ cases			IQ controls		
	N subjects	p-value	t-value	N subjects	p-value	t-value
banks of superior temporal sulcus	1636	0.605	0.517	1541	0.581	-0.553
caudal anterior cingulate cortex	1737	0.348	0.938	1631	0.056	1.914
caudal middle frontal cortex	1741	0.211	-1.251	1636	0.499	0.676
cuneus	1736	0.916	0.106	1637	0.915	-0.107
entorhinal cortex	1634	0.400	0.842	1531	0.319	0.996
frontal pole	1741	0.384	0.871	1638	0.145	1.459
fusiform gyrus	1689	0.545	0.606	1587	0.066	1.842
inferior parietal cortex	1735	0.730	-0.346	1632	0.377	-0.884
inferior temporal gyrus	1653	0.312	-1.012	1574	0.172	1.367
insula	1731	0.067	1.830	1626	0.992	0.010
isthmus cingulate cortex	1738	0.503	-0.670	1631	0.953	0.059
lateral occipital cortex	1738	0.157	1.416	1639	0.706	-0.377
lateral orbitofrontal cortex	1741	0.976	0.031	1638	0.770	-0.293
lingual gyrus	1694	0.624	0.490	1590	0.279	1.083
medial orbitofrontal cortex	1732	0.516	0.650	1630	0.248	1.156
middle temporal gyrus	1597	0.724	0.354	1518	0.101	1.643
paracentral lobule	1740	0.403	-0.837	1637	0.256	-1.137
parahippocampal gyrus	1690	0.964	-0.045	1582	0.676	0.418
pars opercularis of inferior frontal gyrus	1732	0.444	0.765	1634	0.131	1.511
pars orbitalis of inferior frontal gyrus	1741	0.571	0.567	1636	0.252	-1.145
pars triangularis of inferior frontal gyrus	1734	0.412	0.820	1638	0.481	0.705
pericalcarine cortex	1736	0.418	0.809	1636	0.716	-0.364
postcentral gyrus	1718	0.209	1.256	1613	0.625	0.488
posterior cingulate cortex	1738	0.935	-0.082	1636	0.720	-0.358
precentral gyrus	1723	0.331	-0.973	1626	0.586	-0.544
precuneus	1740	0.549	-0.599	1635	0.494	-0.685
rostral anterior cingulate cortex	1727	0.532	0.625	1625	**0.014**	2.466
rostral middle frontal gyrus	1741	0.979	0.027	1635	0.398	0.845
superior frontal gyrus	1735	0.887	0.142	1631	0.891	0.138
superiorparietal	1734	0.133	1.504	1636	0.353	0.930
superior temporal gyrus	1556	0.187	-1.322	1507	0.711	-0.370
supramarginal gyrus	1719	0.679	0.413	1623	**0.011**	-2.552
temporal pole	1689	0.224	-1.217	1586	0.246	1.161
transverse temporal gyrus	1692	0.508	0.663	1590	0.687	0.403
total average thickness	1742	0.371	0.895	1639	0.501	0.674

P-values (P) and t-values (t) for the effects of IQ in cases and controls are indicated. P-values in **bold** are significant at the uncorrected level (P < 0.05), and in ***bold-italic*** those that survive multiple testing correction within the particular analysis indicated (see text).
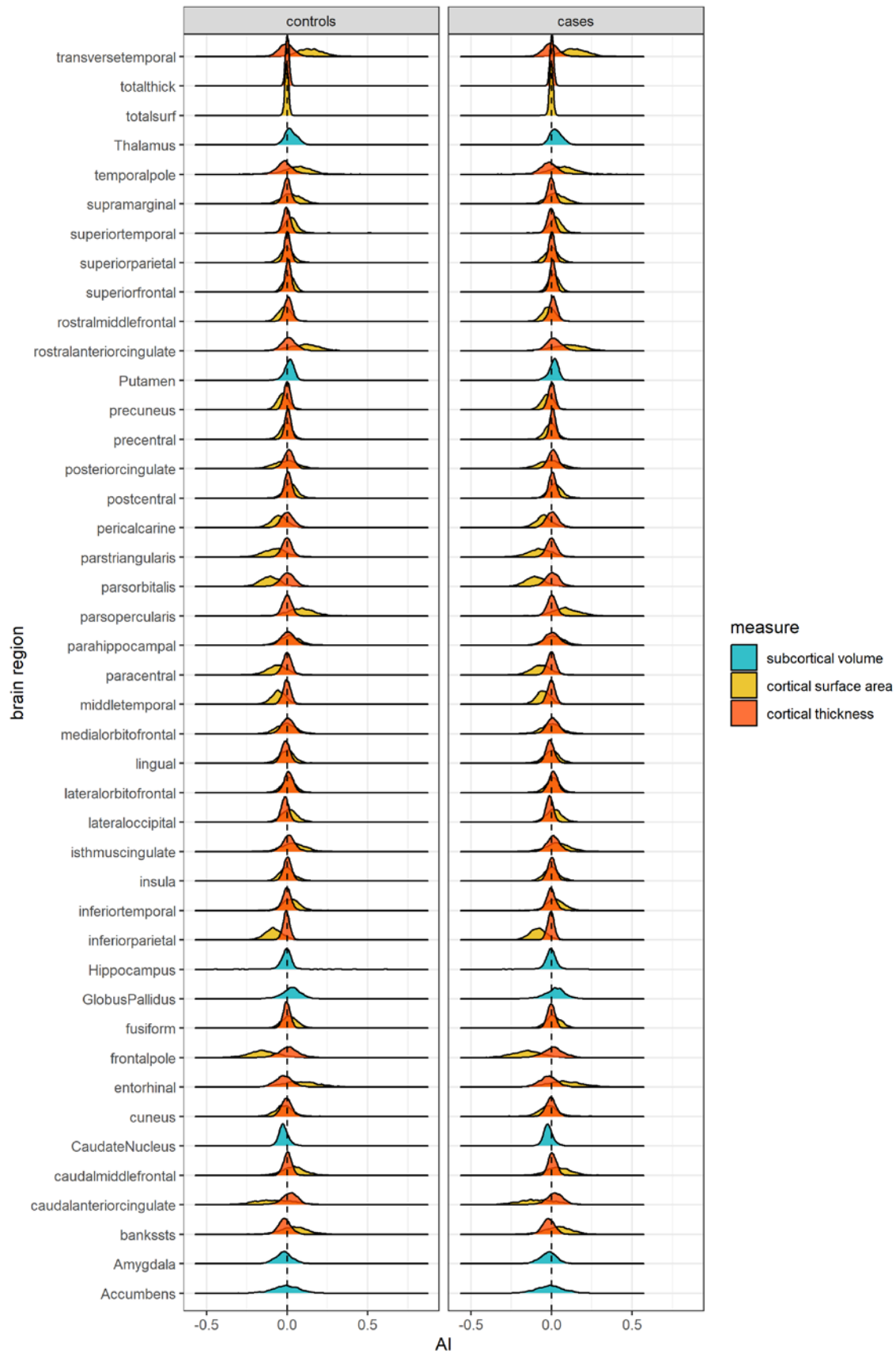
Figure S1. Joyplot of the distributions of AIs in the total study sample (without winsorization), in ADHD cases (right) and controls (left). Shown for subcortical volumes (*cyan*), cortical surface areas (*orange*), and cortical thicknesses (*red*).
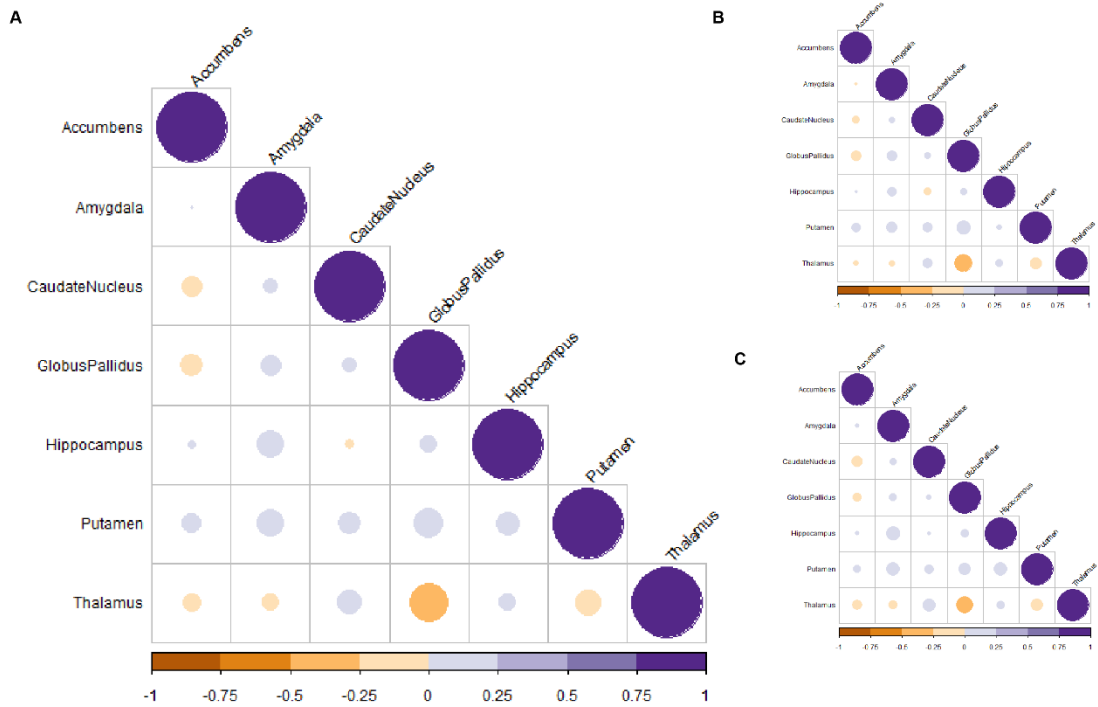
Figure S2. Correlations between AIs of subcortical volumes in (**A**) the total study sample, as well as in (**B**) cases and (**C**) controls. Correlations ranged from -0.30 (between globus pallidus and thalamus) to 0.17 (between globus pallidus and putamen). Negative correlations are in orange and positive correlations are in purple. Color intensities and circle sizes are proportional to the magnitudes of the correlation coefficients, where the area of the circles scales with the absolute value of the corresponding correlation coefficients.
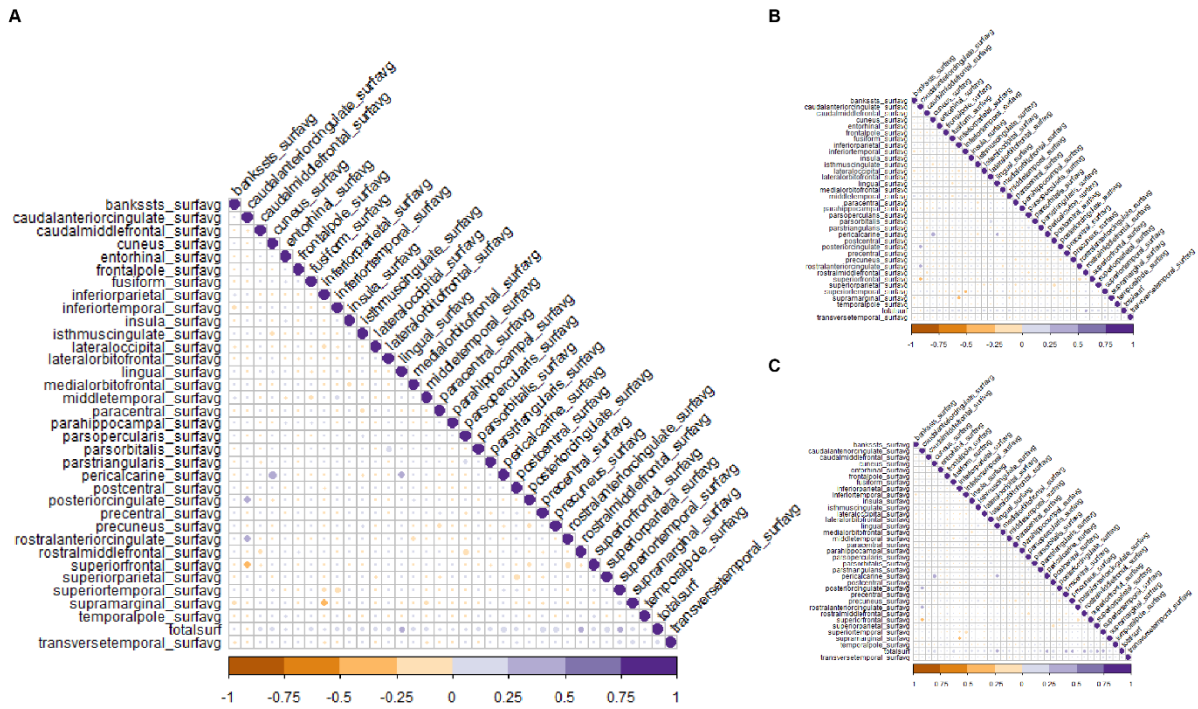
Figure S3. Correlations between AIs of cortical surface areas in (**A**) the total study sample, (**B**) cases, and (**C**) controls. Correlations ranged from -0.42 (between caudal anterior cingulate cortex and superior frontal gyrus) to 0.46 (between cuneus and pericalcarine cortex). Negative correlations are in orange and positive correlations are in purple. Color intensities and circle sizes are proportional to the magnitudes of the correlation coefficients, where the area of the circles scales with the absolute value of the corresponding correlation coefficients.
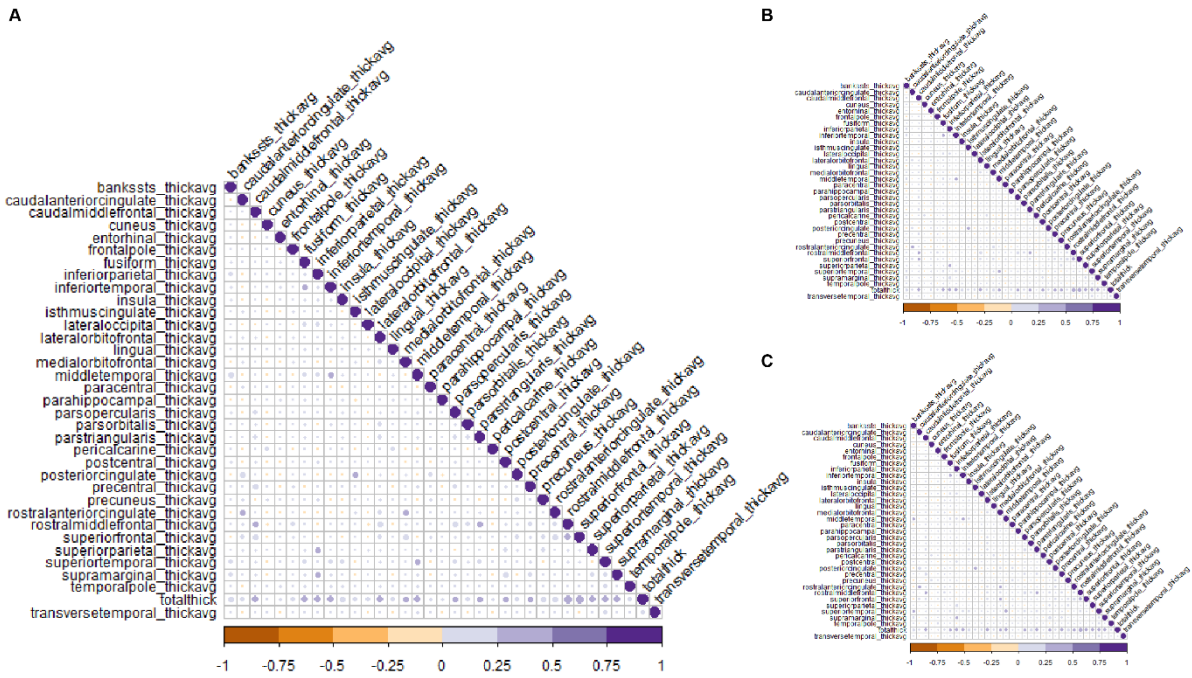
Figure S4. Correlations between AIs of cortical thickness in (**A**) the total study sample, (**B**) cases, and (**C**) controls. Correlations ranged from -0.11 (between lateral occipital cortex and rostral middle frontal cortex) to 0.49 (between rostral middle frontal cortex and total average thickness). Negative correlations are in orange and positive correlations are in purple. Color intensities and circle sizes are proportional to the magnitudes of the correlation coefficients, where the area of the circles scales with the absolute value of the corresponding correlation coefficients.
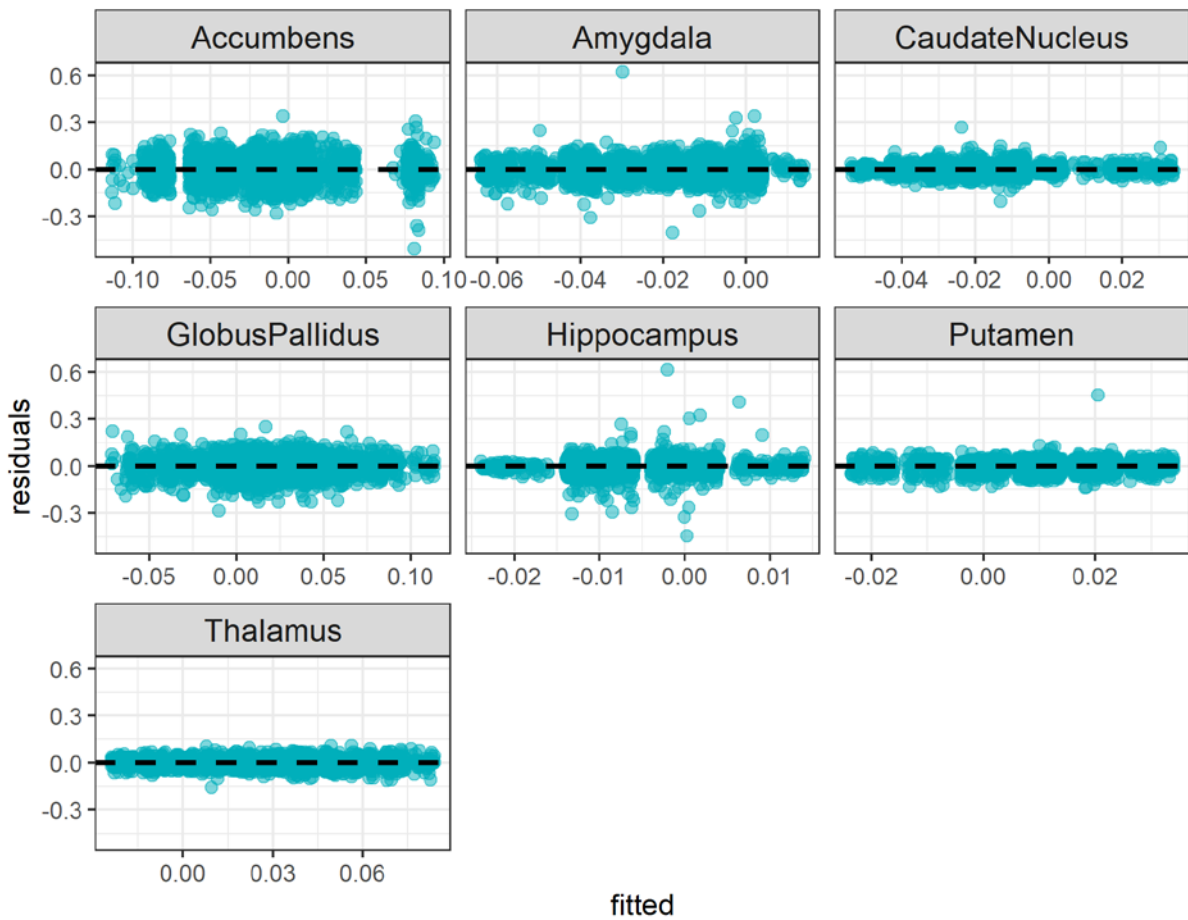
Figure S5. Residual plots of the linear mixed effects model analysis of subcortical volume AIs in the total study sample. The ggplot2 package in R was used to visualize residuals.
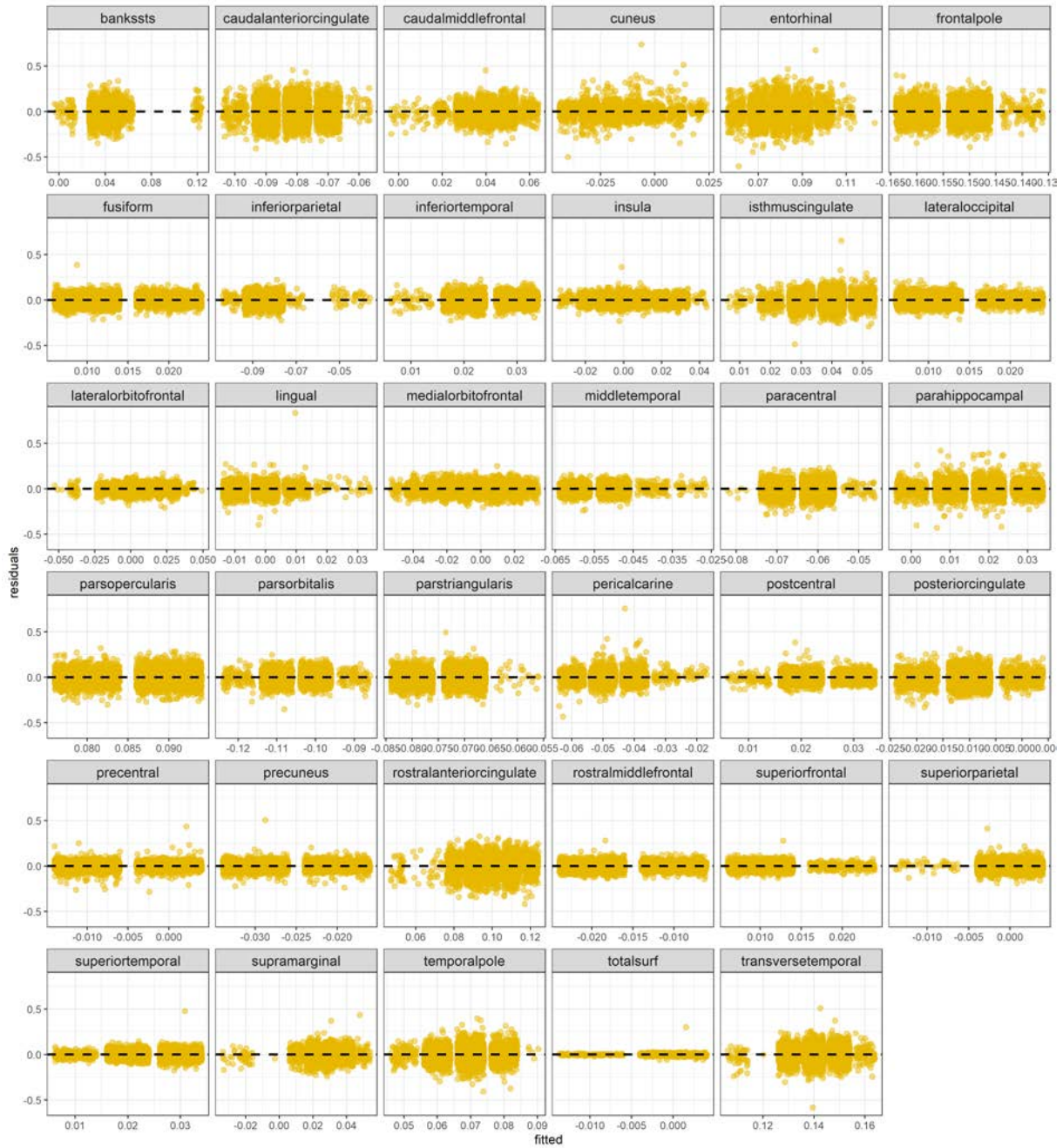
Figure S6. Residual plots of the linear mixed effects model analysis of cortical surface area AIs and the AI of the total average surface area (totalsurf) in the total study sample. The ggplot2 package in R was used to visualize residuals.
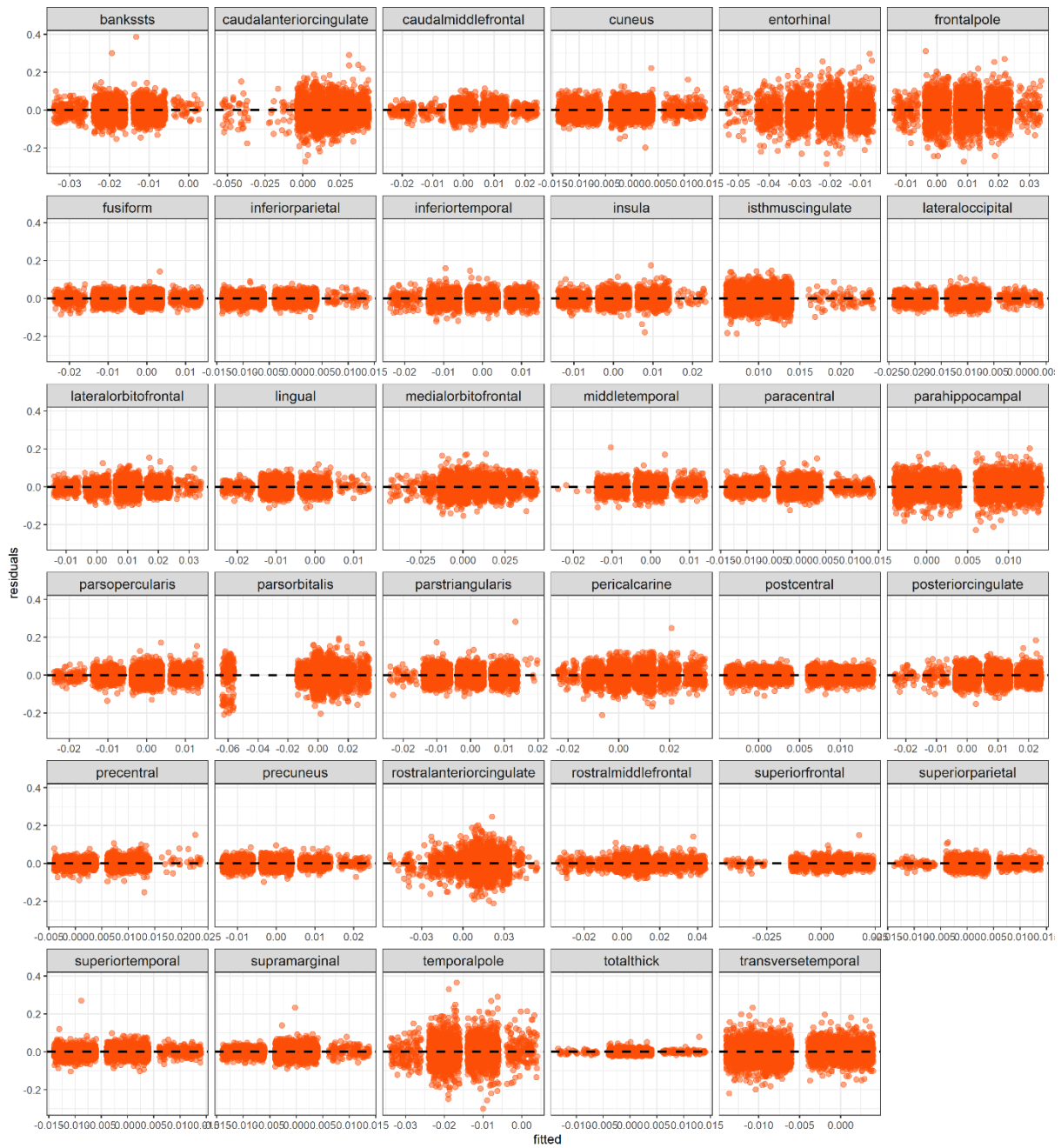
Figure S7. Residual plots of the linear mixed effects model analysis of cortical thickness AIs and the AI of the total average thickness (totalthick) in the total study sample. The ggplot2 package in R was used to visualize residuals.
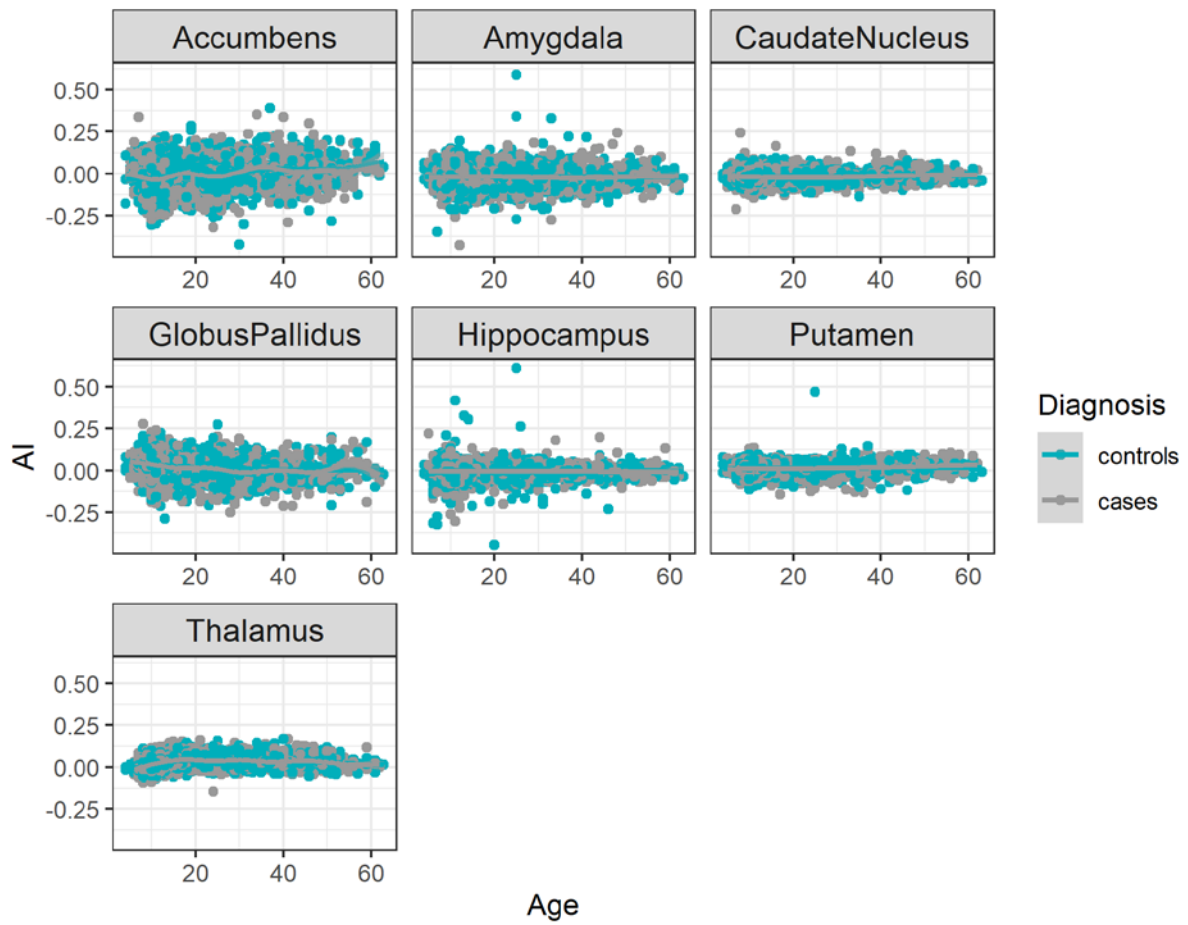
Figure S8. Scatter plots of the relationship between age and AIs of the subcortical volumes.
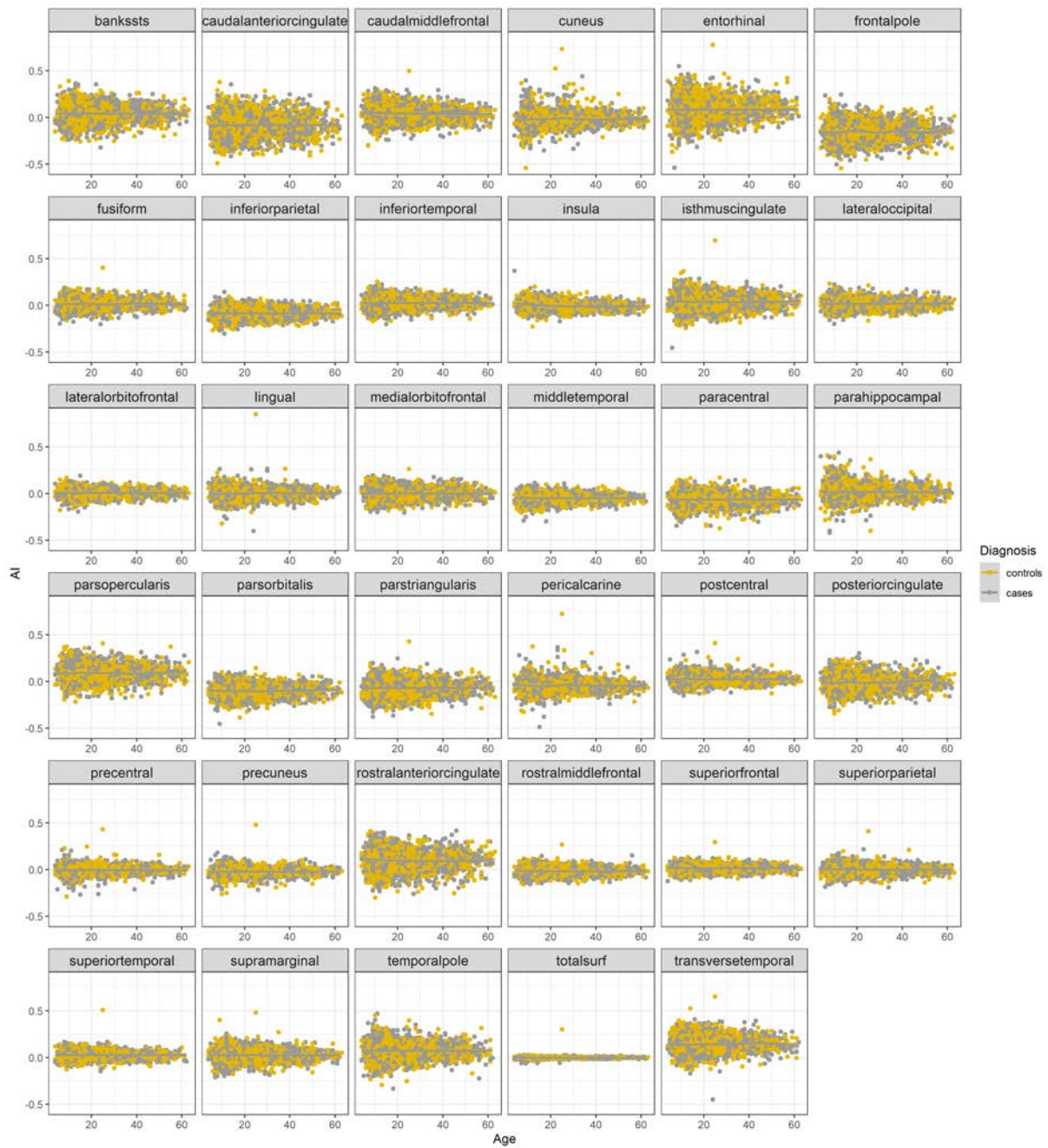
Figure S9. Scatter plots of the relationship between age and AIs of the cortical surface areas.
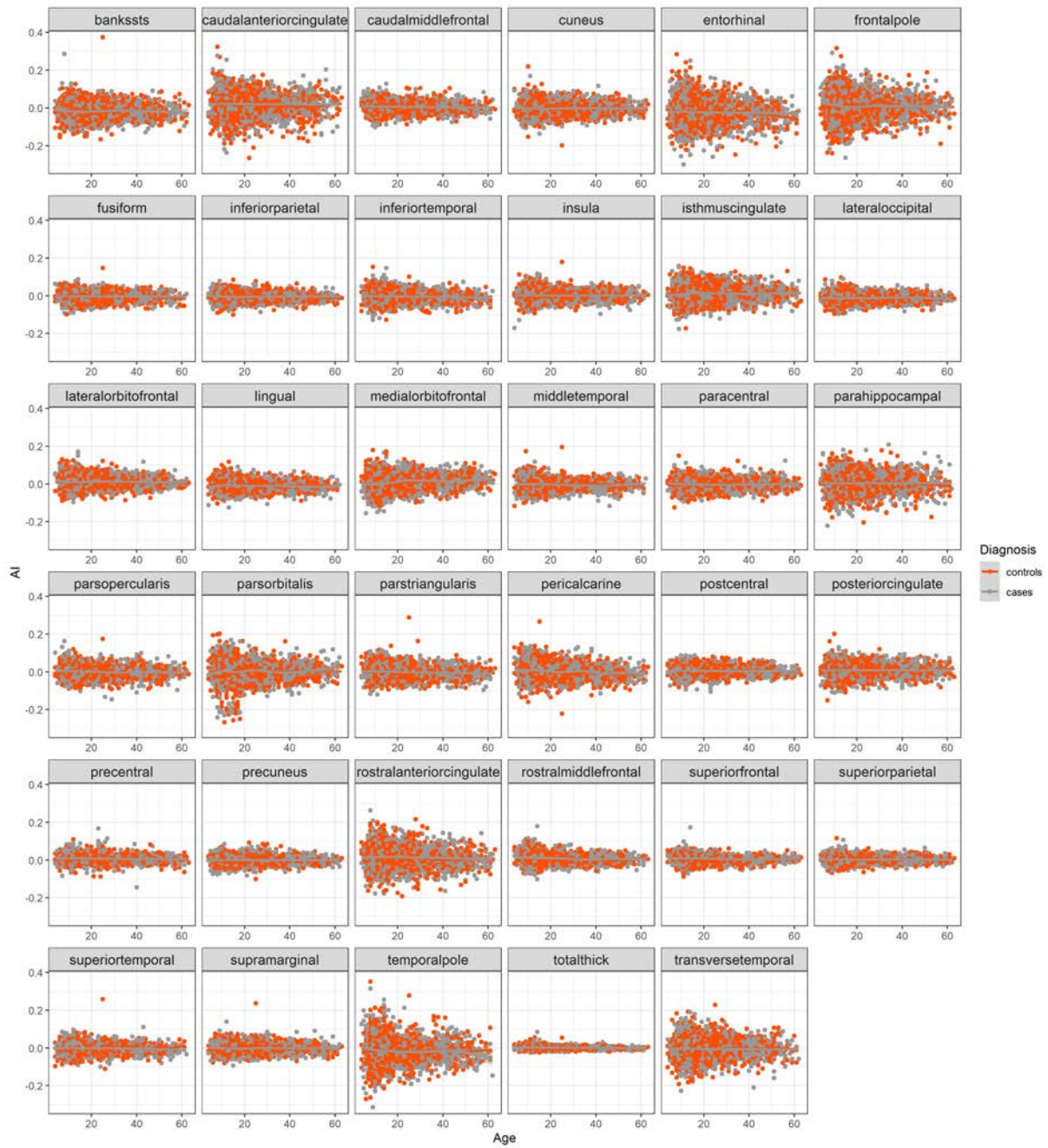
Figure S10. Scatter plots of the relationship between age and AIs of the cortical thickness.
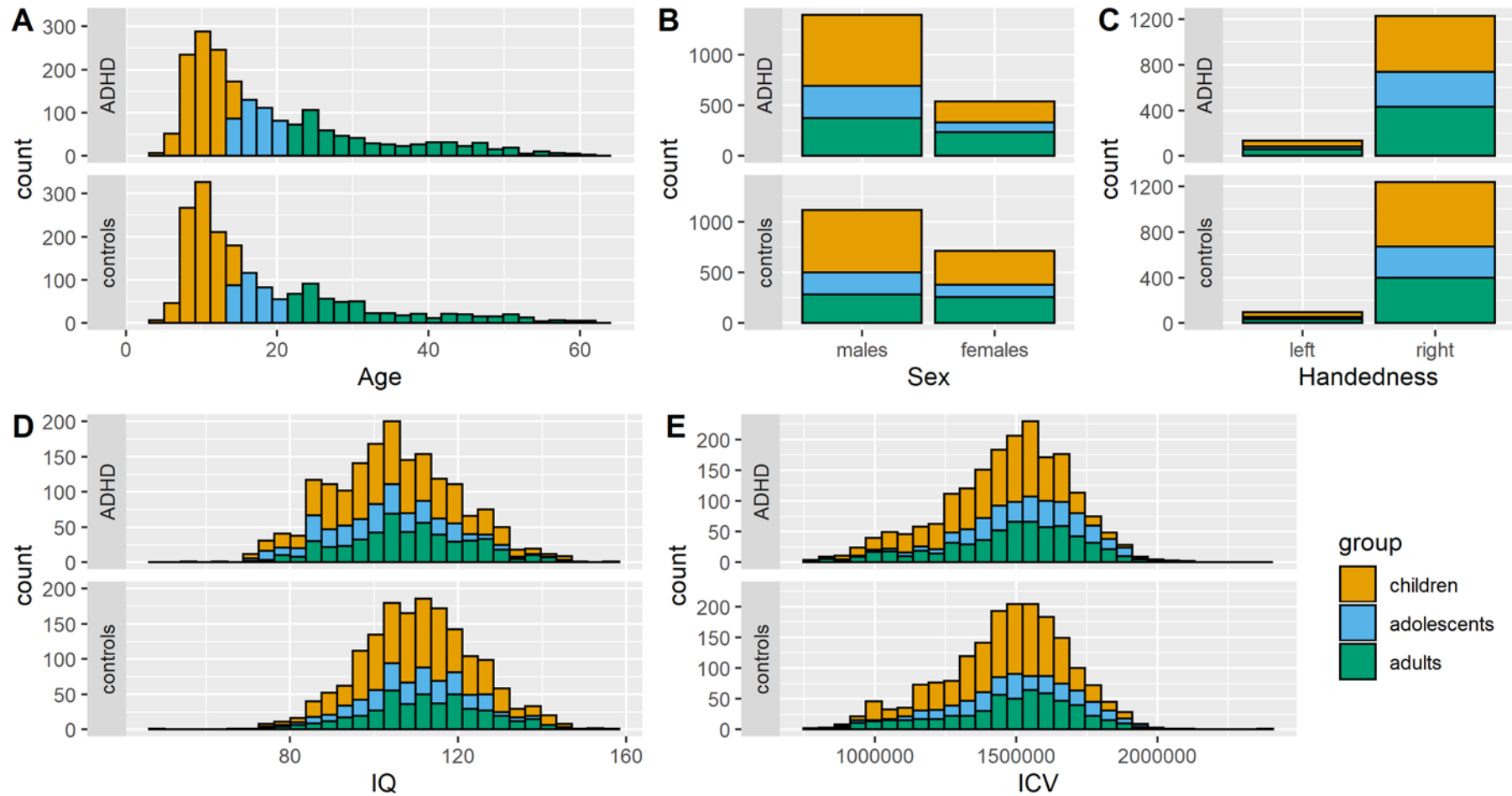
Figure S11. Distributions of (**A**) age, (**B**) sex (**C**) handedness, (**D**) IQ and (**E**) ICV in ADHD and controls, colored by children (*orange*), adolescents (*blue*) and adults (*green*)
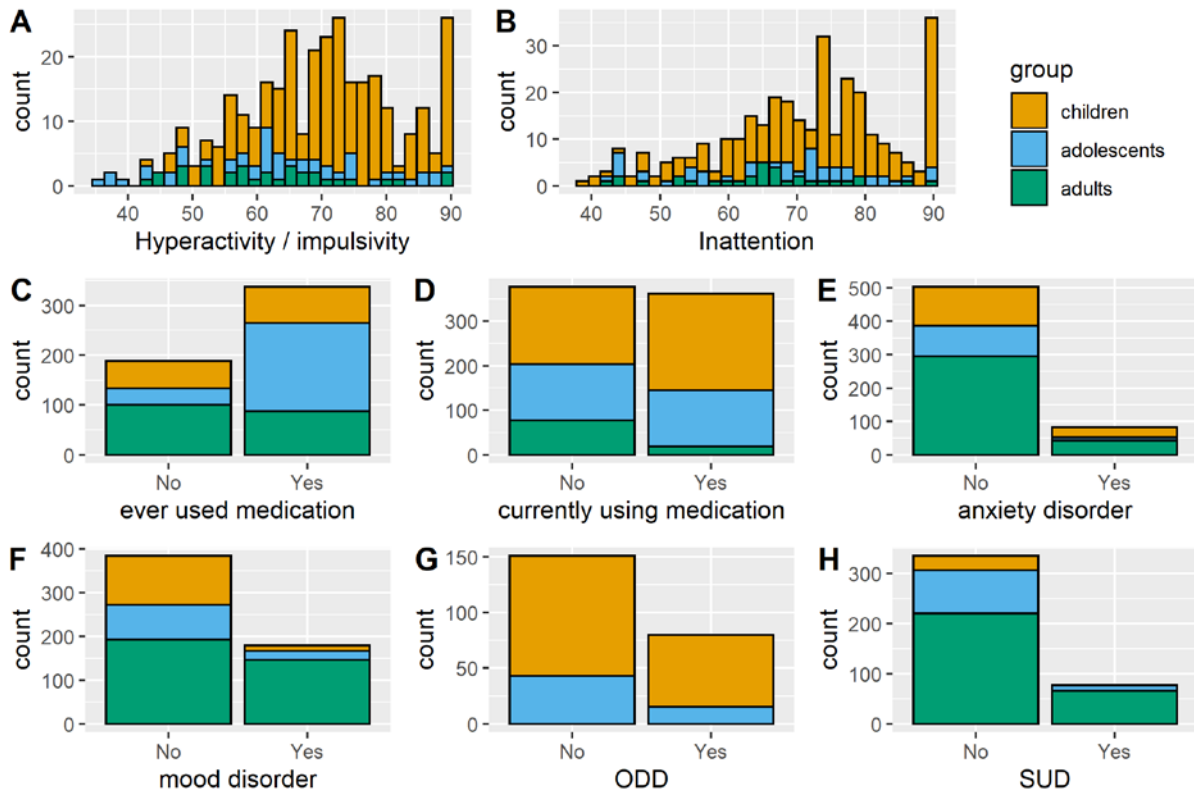
Figure S12. Distributions within ADHD cases of (**A**) hyperactivity/impulsivity symptom scores, (**B**) inattention symptom scores, (**C-D**) medication status (ever used stimulants (**C**) and currently using stimulants and (**D**)), and (**E-H**) comorbidity status ((**E**) anxiety disorder, (**F**) mood disorder, (**G**) obsessive compulsive disorder, and (**H**) substance use disorder), colored by children (*orange*), adolescents (*blue*) and adults (*green*)
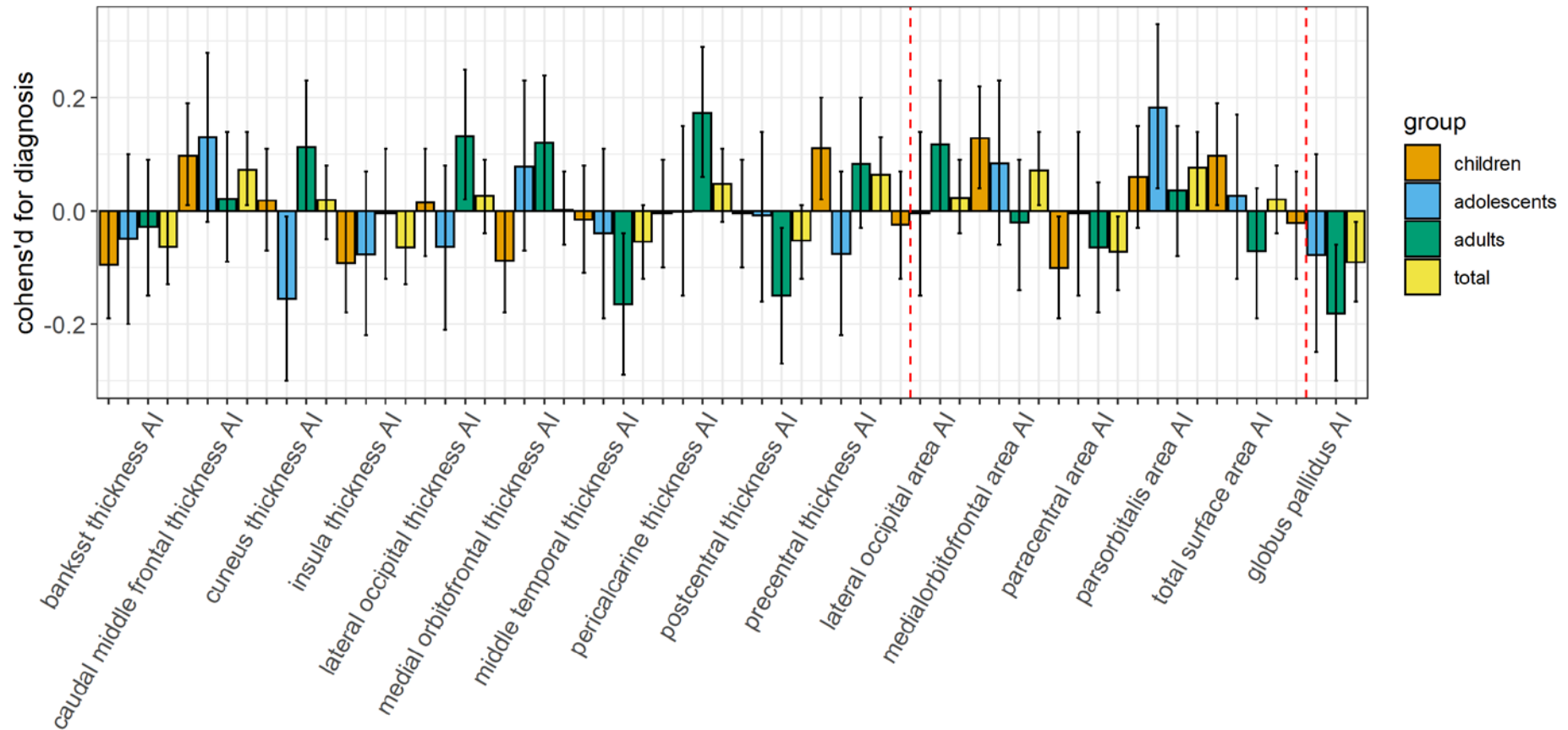
Figure S13. Bar plots of the Cohen's *d* effect sizes for diagnosis in the different age groups analyzed. Shown are only those AIs that showed a nominally significant effect of diagnosis in any of the analyses. All Cohen's *d* values above zero represent a mean shift towards greater leftward or reduced rightward asymmetry in ADHD compared to controls, and those below zero represent mean shifts towards greater rightward of reduced leftward asymmetry in ADHD compared to controls. The different age groups are shown in different colors: *orange* = children; *blue* = adolescents; *green* = adults; *yellow* = all age groups combined. The solid vertical lines reflect the error bars, indicating the 95% CI interval around Cohen's *d*, and the dotted vertical lines separate the different types of measure (i.e., thickness AIs, surface area AIs, subcortical volume AIs).

Supplementary References

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