

Table S1. The MNI coordinates associated with the 32 regions of interest from 8 resting-state network

Resting-state network	Region	Region (abbreviation)	Coordination
Default mode network	Medial prefrontal cortex	MPFC	1 55 -3
Default mode network	Left lateral parietal	LP(L)	-39 -77 33
Default mode network	Right lateral parietal	LP(R)	47 -67 29
Default mode network	Posterior cingulate cortex	PCC	1 -61 38
Sensorimotor network	Left lateral sensorimotor	Sensorimotor lateral(L)	-55 -12 29
Sensorimotor network	Right lateral sensorimotor	Sensorimotor lateral(R)	56 -10 29
Sensorimotor network	Superior sensorimotor	Sensorimotor superior	0 -31 67
Visual network	Medial visual	Visual medial	2 -79 12
Visual network	Occipital visual	Visual occipital	0 -93 -4
Visual network	Left lateral visual	Visual lateral(L)	-37 -79 10
Visual network	Right lateral visual	Visual lateral(R)	38 -72 13
Salience network	Anterior cingulate cortex	ACC	0 22 35
Salience network	Left anterior insula	AInsula(L)	-44 13 1
Salience network	Right anterior insula	AInsula(R)	47 14 0
Salience network	Left rostral prefrontal cortex	RPFC(L)	-32 45 27
Salience network	Right rostral prefrontal cortex	RPFC(R)	32 46 27
Salience network	Left supramarginal gyrus	SMG(L)	-60 -39 31
Salience network	Right supramarginal gyrus	SMG(R)	62 -35 32
Dorsal attention network	Left frontal eye field	FEF(L)	-27 -9 64
Dorsal attention network	Right frontal eye field	FEF(R)	30 -6 64
Dorsal attention network	Left intraparietal sulcus	IPS(L)	-39 43 52
Dorsal attention network	Right intraparietal sulcus	IPS(R)	39 -42 54
Frontopariatal network	Left lateral prefrontal cortex	LPFC(L)	-43 33 28
Frontopariatal network	Left posterior parietal cortex	PPC(L)	-46 -58 49
Frontopariatal network	Right lateral prefrontal cortex	LPFC(R)	41 38 30
Frontopariatal network	Right posterior parietal cortex	PPC(R)	52 -52 45
Language network	Left inferior frontal gyrus	IFG(L)	-51 26 2
Language network	Right inferior frontal gyrus	IFG(R)	54 28 1
Language network	Left posterior superior temporal gyrus	pSTG(L)	-57 -47 15

Language network	Right posterior superior temporal gyrus	pSTG(R)	59 -42 13
Cerebellar network	Anterior cerebellar	CA	0 -63 -30
Cerebellar network	Posterior cerebellar	CP	0 -79 -32

Table S2. Mean/ standard deviation (STD) of connection strengths in the default mode network. The rows of the table show source regions, and columns represent target regions. Connections with power > 0.05 Hertz (Hz) are shown in bold. The Mean/STD of connection strengths in the resting-state network are presented in Hz.

Default mode network Late-onset AD				
Mean/STD	MPFC	LP(L)	LP(R)	PCC
MPFC	-0.1948±0.5031	-0.049±0.4421	0.0597±0.3906	0.0702±0.3805
LP(L)	-0.1917±0.4564	0.241±0.3139	0.0376±0.2672	0.0479±0.3619
LP(R)	-0.2838±0.5346	0.0096±0.3236	0.1762±0.2936	0.1237±0.327
PCC	-0.1744±0.4374	-0.1018±0.408	0.1993±0.4116	0.152±0.3759
Default mode network aMCI				
Mean/STD	MPFC	LP(L)	LP(R)	PCC
MPFC	-0.0939±0.2138	-0.0971±0.5526	0.0744±0.5253	-0.2802±0.5441
LP(L)	-0.1103±0.2917	0.1456±0.5393	0.0714±0.4277	0.0933±0.43
LP(R)	-0.1244±0.4472	-0.2282±0.5024	0.1601±0.4274	0.1493±0.3947
PCC	0.1298±0.288	-0.2154±0.4811	-0.0417±0.5369	-0.2016±0.5045
Default mode network normal				
Mean/STD	MPFC	LP(L)	LP(R)	PCC
MPFC	-0.1123±0.3571	-0.3602±0.6139	-0.2347±0.5749	0.0303±0.3984
LP(L)	0.173±0.3913	-0.0803±0.4216	0.1519±0.3891	-0.0314±0.3136
LP(R)	0.0289±0.4336	0.1357±0.5376	0.1074±0.422	0.1114±0.3123
PCC	0.018±0.3286	-0.1799±0.6781	0.278±0.2993	0.0687±0.2975

The medial prefrontal cortex (MPFC), left lateral parietal (LP(L)), right lateral parietal (LP(R)), and posterior cingulate cortex (PCC).

Table S3. Mean/ standard deviation (STD) of connection strengths in the cerebellar network. The rows of the table show source regions, and columns represent target regions. Connections with power > 0.05 Hertz (Hz) are shown in bold. The Mean/STD of connection strengths in the resting-state network are presented in Hz.

Cerebellar network Late-onset AD		
Mean/STD	CA	CP
CA	0.5268±0.3538	-0.1225±0.3036
CP	0.1576±0.3913	0.2551±0.2948
Cerebellar network aMCI		
Mean/STD	CA	CP
CA	0.1126±0.6022	-0.1354±0.3889
CP	-0.0354±0.8016	0.0028±0.4616
Cerebellar network normal		
Mean/STD	CA	CP

CA	0.1448±0.6776	0.0308±0.4729
CP	-0.2734±0.7969	0.058±0.4355

Cerebellar Anterior (CA), Cerebellar Posterior (CP).

Table S4. Mean/ standard deviation (STD) of connection strengths in the dorsal attention network. The rows of the table show source regions, and columns represent target regions. Connections with power > 0.05 Hertz (Hz) are shown in bold. The Mean/STD of connection strengths in the resting-state network are presented in Hz.

Dorsal attention network Late-onset AD				
Mean/STD	FEF(L)	FEF(R)	IPS(L)	IPS(R)
FEF(L)	-0.0519±0.5304	0.2034±0.5523	0.287±0.411	-0.1844±0.5695
FEF(R)	0.1537±0.2694	0.0327±0.3593	0.0364±0.6034	-0.0936±0.4363
IPS(L)	-0.1418±0.5812	-0.2926±0.6407	-0.0756±0.554	-0.2425±0.7862
IPS(R)	-0.1984±0.6116	0.0457±0.5509	0.0264±0.2732	-0.0185±0.4051
Dorsal attention network aMCI				
Mean/STD	FEF(L)	FEF(R)	IPS(L)	IPS(R)
FEF(L)	0.0979±0.4236	0.0864±0.4087	-0.2168±0.5523	-0.0235±0.4393
FEF(R)	0.0182±0.5701	-0.1093±0.4494	-0.372±0.5519	-0.1774±0.5737
IPS(L)	-0.0171±0.3375	0.138±0.5039	-0.0658±0.5152	0.0961±0.2959
IPS(R)	-0.0324±0.4299	0.1551±0.4253	0.0762±0.5769	0.0954±0.4449
Dorsal attention network normal				
Mean/STD	FEF(L)	FEF(R)	IPS(L)	IPS(R)
FEF(L)	0.0238±0.4555	0.1554±0.4249	-0.0836±0.4543	0.0371±0.5227
FEF(R)	0.1223±0.5017	0.034±0.3776	-0.1564±0.5864	0.1095±0.4451
IPS(L)	0.0048±0.36	-0.0178±0.3541	0.0609±0.3527	0.1062±0.4176
IPS(R)	-0.3116±0.3849	0.0003±0.2841	-0.0355±0.5638	0.1137±0.4163

Left frontal eye field (FEF(L)), right frontal eye field (FEF(R)), left intraparietal sulcus (IPS(L)), right intraparietal sulcus (IPS(R)).

Table S5. Mean/ standard deviation (STD) of connection strengths in the sensorimotor network. The rows of the table show source regions, and columns represent target regions. Connections with power > 0.05 Hertz (Hz) are shown in bold. The Mean/STD of connection strengths in the resting-state network is presented in Hz.

Sensorimotor network Late-onset AD			
Mean/STD	SML(L)	SML(R)	SMS
SML(L)	0.0062±0.6041	-0.2204±0.7098	-0.1655±0.4555
SML(R)	0.1037±0.3392	0.2294±0.4347	-0.2055±0.4804
SMS	-0.2257±0.494	-0.0743±0.5211	-0.0737±0.4367
Sensorimotor network aMCI			
Mean/STD	SML(L)	SML(R)	SMS
SML(L)	0.0432±0.4886	0.0994±0.4121	-0.1453±0.3633
SML(R)	0.0078±0.621	0.1664±0.3402	-0.4553±0.5763
SMS	-0.0601±0.5495	0.0602±0.4092	-0.1174±0.3768
Sensorimotor network normal			

Mean/STD	SML(L)	SML(R)	SMS
SML(L)	0.1798±0.3148	0.083±0.3874	-0.2487±0.5767
SML(R)	0.2023±0.5704	0.1763±0.4755	-0.1815±0.4629
SMS	-0.0538±0.5564	-0.1753±0.7828	-0.1277±0.3987

Right sensorimotor lateral (SML(R)), left sensorimotor lateral (SML(L)), sensorimotor superior (SMS).

Table S6. Mean/ standard deviation (STD) of connection strengths in the visual network. The rows of the table show source regions, and columns represent target regions. Connections with power > 0.05 Hertz (Hz) are shown in bold. The Mean/STD of connection strengths in the resting-state network is presented in Hz.

Visual network Late-onset AD				
Mean/STD	VM	VO	VL(L)	VL(R)
VM	-0.0424±0.3695	-0.0446±0.3921	-0.3499±0.5886	-0.0059±0.6237
VO	0.2141±0.4857	-0.0694±0.38	-0.0142±0.524	-0.0347±0.5984
VL(L)	0.1123±0.189	-0.048±0.3396	0.2159±0.3503	0.1616±0.3396
VL(R)	0.1078±0.2355	0.0385±0.3839	-0.0735±0.5119	0.1482±0.4724
Visual network aMCI				
Mean/STD	VM	VO	VL(L)	VL(R)
VM	-0.0316±0.3711	-0.1772±0.3558	-0.1024±0.6743	-0.1621±0.4861
VO	0.4176±0.386	-0.2015±0.4258	-0.2809±0.5072	0.0259±0.4511
VL(L)	0.0186±0.3126	0.0323±0.4403	0.0516±0.3958	0.1064±0.3256
VL(R)	0.1545±0.204	-0.1764±0.347	0.1657±0.4102	0.3012±0.3156
Visual network normal				
Mean/STD	VM	VO	VL(L)	VL(R)
VM	-0.1311±0.3386	-0.0486±0.4331	0.0279±0.4028	-0.3062±0.6314
VO	0.4184±0.404	-0.1143±0.3851	0.091±0.6097	-0.3243±0.5777
VL(L)	0.1847±0.3356	-0.1349±0.3413	0.3786±0.3576	-0.0093±0.3689
VL(R)	0.0966±0.3162	-0.0522±0.4088	0.1251±0.2682	0.2283±0.4745

Right visual lateral (VL(R)), left visual lateral (VL(L)), visual medial (VM), visual occipital (VO).

Table S7. Mean/ standard deviation (STD) of connection strengths in the salience network. The rows of the table show source regions, and columns represent target regions. Connections with power > 0.05 Hertz (Hz) are shown in bold. The Mean/STD of connection strengths in the resting-state network is presented in Hz.

Salience network Late-onset AD							
Mean/S TD	ACC	AInsula(L)	AInsula(R)	RPFC(L)	RPFC(R)	SMG(L)	SMG(R)
ACC	-	0.0734±0.3	-	-	0.1563±0.3	0.0338±0.3	-
	0.0685±0.314	332	0.1126±0.4785	0.053±0.2434	788	909	0.191±0.3693
AInsula(L)	-	-	0.1431±0.4	0.0025±0.3	-	-	-
	0.2551±0.311	0.1003±0.2954	105	514	0.1262±0.3621	0.2758±0.2536	0.178±0.3188

Alnsula(R)	- 0.2048±0.3 178	0.0493±0.4 832	- 0.2169±0.3 835	- 0.2599±0.4 567	- 0.0179±0.4 487	- 0.2567±0.3 925	- 0.1413±0.3 711
RPFC(L)	0.0604±0.2 809	0.0036±0.3 916	- 0.0552±0.2 359	0.1224±0.2 828	0.254±0.36 25	- 0.0201±0.2 71	- 0.0471±0.2 209
RPFC(R)	0.1266±0.4 422	- 0.1048±0.3 229	- 0.0006±0.3 904	- 0.0056±0.3 42	- 0.0021±0.3 345	- 0.1394±0.3 698	- 0.0685±0.3 065
SMG(L)	- 0.0832±0.5 319	0.1334±0.2 185	- 0.2121±0.2 874	- 0.1108±0.1 582	- 0.1079±0.3 271	- 0.0477±0.2 394	0.1198±0.3 465
SMG(R)	0.1019±0.3 924	- 0.0541±0.3 032	0.049±0.21 41	- 0.0629±0.2 37	- 0.1004±0.3 067	0.1471±0.3 906	0.0765±0.3 364
Salience network aMCI							
Mean/S TD	ACC	Alnsula(L)	Alnsula(R)	RPFC(L)	RPFC(R)	SMG(L)	SMG(R)
ACC	0.0756±0.2 328	0.0402±0.3 674	- 0.0424±0.3 365	0.0079±0.3 286	0.0104±0.4 143	- 0.0459±0.2 523	0.0737±0.2 865
Alnsula(L)	- 0.1768±0.2 821	- 0.1455±0.4 154	0.0322±0.5 298	- 0.0726±0.3 978	- 0.0487±0.4 519	- 0.3316±0.6 011	- 0.1083±0.4 297
Alnsula(R)	- 0.1238±0.4 495	0.0804±0.4 1	- 0.0279±0.3 851	- 0.2344±0.5 008	0.065±0.29 94	- 0.0894±0.6 053	- 0.0963±0.4 094
RPFC(L)	0.0967±0.3 008	0.1018±0.3 191	- 0.156±0.26 31	- 0.0502±0.3 451	0.3015±0.3 969	- 0.0837±0.3 707	0.0188±0.2 798
RPFC(R)	0.0473±0.3 658	0.0158±0.3 13	- 0.0073±0.3 187	- 0.1013±0.3 716	- 0.1358±0.3 231	- 0.024±0.53 66	0.0156±0.3 421
SMG(L)	- 0.0228±0.1 864	- 0.0102±0.2 231	0.0315±0.3 879	- 0.0972±0.2 842	0.0063±0.3 246	- 0.1159±0.4 88	0.0278±0.4 431
SMG(R)	0.0019±0.2 925	0.0934±0.2 666	- 0.044±0.27 39	- 0.0789±0.3 724	- 0.0823±0.2 394	0.032±0.29 58	0.0808±0.3 194
Salience network normal							
Mean/S TD	ACC	Alnsula(L)	Alnsula(R)	RPFC(L)	RPFC(R)	SMG(L)	SMG(R)
ACC	0.0898±0.3 346	- 0.0789±0.2 64	- 0.0558±0.2 466	- 0.0015±0.4 281	- 0.0043±0.2 929	- 0.0894±0.3 328	0.0299±0.3 538

AInsula(L)	- 0.0742±0.5 928	- 0.1069±0.3 336	0.1857±0.4 851	- 0.2104±0.3 58	0.0026±0.3 867	- 0.11±0.398 1	0.1172±0.6 132
AInsula(R)	- 0.1137±0.4 138	0.2811±0.3 675	- 0.1316±0.3 279	- 0.0593±0.3 459	0.0003±0.2 478	- 0.0754±0.3 636	- 0.0004±0.4 806
RPFC(L)	0.0093±0.4 258	- 0.0049±0.3 59	- 0.1526±0.3 922	0.0711±0.2 513	0.0379±0.4 475	- 0.1467±0.4 117	- 0.166±0.34 41
RPFC(R)	- 0.043±0.34 04	- 0.0778±0.2 644	- 0.0394±0.4 763	0.0517±0.4 031	0.0326±0.4 074	- 0.304±0.51 16	- 0.0432±0.3 452
SMG(L)	0.0475±0.2 129	0.025±0.25 84	- 0.0115±0.1 812	0.0306±0.2 879	- 0.0272±0.2 153	0.1568±0.3 673	0.237±0.20 56
SMG(R)	0.033±0.29 42	- 0.0927±0.2 455	- 0.0227±0.3 366	0.0381±0.4 073	0.02±0.330 2	0.0138±0.3 506	0.0764±0.3 547

Anterior cingulate cortex (ACC), left anterior insula (AInsula(L)), right anterior insula (AInsula(R)), left rostral prefrontal cortex (RPFC(L)), right rostral prefrontal cortex (RPFC(R)), left supramarginal gyrus (SMG(L)), right supramarginal gyrus (SMG(R)).

Table S8. Mean/ standard deviation (STD) of connection strengths in the language network. The rows of the table show source regions, and columns represent target regions. Connections with power > 0.05 Hertz (Hz) are shown in bold. The Mean/STD of connection strengths in the resting-state network is presented in Hz.

Language network Late-onset AD				
Mean/STD	IFG(L)	IFG(R)	pSTG(L)	pSTG(R)
IFG(L)	0.2277±0.2982	0.2153±0.4016	-0.4911±0.3282	-0.3382±0.3775
IFG(R)	-0.0686±0.3032	0.1019±0.4515	-0.6058±0.671	-0.4233±0.3589
pSTG(L)	0.269±0.1682	0.1327±0.3245	-0.0395±0.4104	0.2552±0.3479
pSTG(R)	0.1718±0.3441	0.1447±0.2669	0.3382±0.4182	-0.0672±0.4418
Language network aMCI				
Mean/STD	IFG(L)	IFG(R)	pSTG(L)	pSTG(R)
IFG(L)	-0.076±0.2187	0.0397±0.6772	-0.1321±0.4353	-0.1396±0.5338
IFG(R)	0.0556±0.3933	-0.2367±0.3432	-0.2553±0.5652	-0.1733±0.3716
pSTG(L)	0.1992±0.2714	-0.1669±0.3677	0.0728±0.4527	0.0688±0.3189
pSTG(R)	0.025±0.2168	-0.0056±0.48	0.093±0.4245	0.0532±0.3556
Language network normal				
Mean/STD	IFG(L)	IFG(R)	pSTG(L)	pSTG(R)
IFG(L)	-0.1363±0.3306	0.1102±0.5921	-0.314±0.3783	-0.159±0.6939
IFG(R)	-0.064±0.4753	0.0773±0.3986	-0.2375±0.3974	-0.1185±0.3843
pSTG(L)	0.0689±0.2677	0.0296±0.3855	0.1153±0.3405	0.2704±0.4178
pSTG(R)	0.0895±0.3506	-0.0159±0.4873	0.1547±0.4383	-0.1758±0.417

Left inferior frontal gyrus (IFG(L)), right inferior frontal gyrus (IFG(R)), left posterior superior temporal gyrus (pSTG(L)), right posterior superior temporal gyrus (pSTG(R)).

Table S9. Mean/ standard deviation (STD) of connection strengths in the frontoparietal network. The rows of the table show source regions, and columns represent target regions. Connections with power > 0.05 Hertz (Hz) are shown in bold. The Mean/STD of connection strengths in the resting-state network is presented in Hz.

Frontoparietal network Late-onset AD				
Mean/STD	LPFC(L)	PPC(L)	LPFC(R)	PPC(R)
LPFC(L)	0.1158±0.3742	-0.1073±0.3525	0.1378±0.2791	-0.0848±0.912
PPC(L)	0.0014±0.4017	0.1144±0.4278	-0.0895±0.4719	0.3607±0.377
LPFC(R)	0.1584±0.2611	-0.0867±0.3348	0.1609±0.3069	-0.2101±0.527
PPC(R)	-0.1621±0.5642	0.0068±0.4752	-0.135±0.4989	-0.333±0.3608
Frontoparietal network aMCI				
Mean/STD	LPFC(L)	PPC(L)	LPFC(R)	PPC(R)
LPFC(L)	-0.1075±0.3744	0.0424±0.6427	0.1861±0.562	-0.2704±0.4646
PPC(L)	0.0443±0.3177	0.0733±0.3901	-0.123±0.3868	0.2857±0.2411
LPFC(R)	0.0132±0.4775	-0.0519±0.5009	-0.0091±0.3679	-0.1926±0.5945
PPC(R)	-0.0483±0.4472	0.0125±0.3401	-0.0725±0.4186	0.0929±0.3935
Frontoparietal network normal				
Mean/STD	LPFC(L)	PPC(L)	LPFC(R)	PPC(R)
LPFC(L)	0.0965±0.3387	-0.2764±0.4156	0.3774±0.2993	-0.3053±0.6246
PPC(L)	0.1876±0.2355	-0.1511±0.3726	-0.0965±0.4852	0.3863±0.5358
LPFC(R)	-0.0924±0.4521	-0.323±0.5528	-0.1087±0.5188	-0.2327±0.3933
PPC(R)	-0.07±0.4392	0.1658±0.2866	-0.0065±0.7043	-0.095±0.3862

Left lateral prefrontal cortex (LPFC(L)), left posterior parietal cortex (PPC(L)), right lateral prefrontal cortex (LPFC(R)), right posterior parietal cortex (PPC(R)).