

Distinct Alteration Patterns of Resting-State Functional Connectivity of the Corticostriatal Circuits Effected by Cigarette Smoking in Mild Cognitive Impairment Patients and Cognitively Normal subjects

Supplementary Table 1. The demographic and clinical characteristics.

Variables	CN non-smokers (n=86)	CN smokers (n=44)	MCI non-smokers (n=62)	MCI smokers (n=32)	F/ χ^2	<i>p</i>
Demographic factors						
Age(years)	75.14±7.85	75.83±7.64	76.19±6.83	76.19±7.27	0.30	0.824
Sex(F:M)	40:46	21:23	22:40	12:20	2.64	0.451
Education(years)	16.16±2.34	16.27±2.61	16.13±2.47	16.03±1.98	0.07	0.977
Vascular risk factors						
Hypertension, n(%)	42(48.8)	21(47.7)	29(46.8)	19(59.4)	1.50	0.682
Diabetes mellitus, n(%)	4(4.7)	1(2.3)	3(4.8)	0(0.0)	1.98	0.576
Hypercholesterolemia, n(%)	49(57.0)	22(50.00)	30(48.4)	19(59.4)	1.73	0.630
Neuropsychological tests						
Memory						
WMS-LM immediate recall	14.21±3.94	15.23±3.36	10.47±3.52	11.66±4.83	17.85	<0.001 ^{abcd}
WMS-LM delayed recall	12.87±4.16	14.20±3.62	8.24±3.97	9.69±4.64	24.92	<0.001 ^{abcd}
Attention						
TMT-A	32.15±9.92	29.84±6.69	35.02±13.19	37.84±13.11	4.14	0.007 ^d
Execution						
TMT-B	83.23±41.46	70.50±27.23	99.56±58.41	104.47±55.76	4.92	0.002 ^{cd}
Language						
SVF(animal)	20.77±5.01	21.32±5.87	19.02±4.84	18.56±5.28	3.13	0.027 ^{abcd}
Head Motion(FD value)	0.11±0.07	0.12±0.07	0.11±0.06	0.13±0.07	0.91	0.435

Values are expressed as mean ± standard deviation, number of participants.

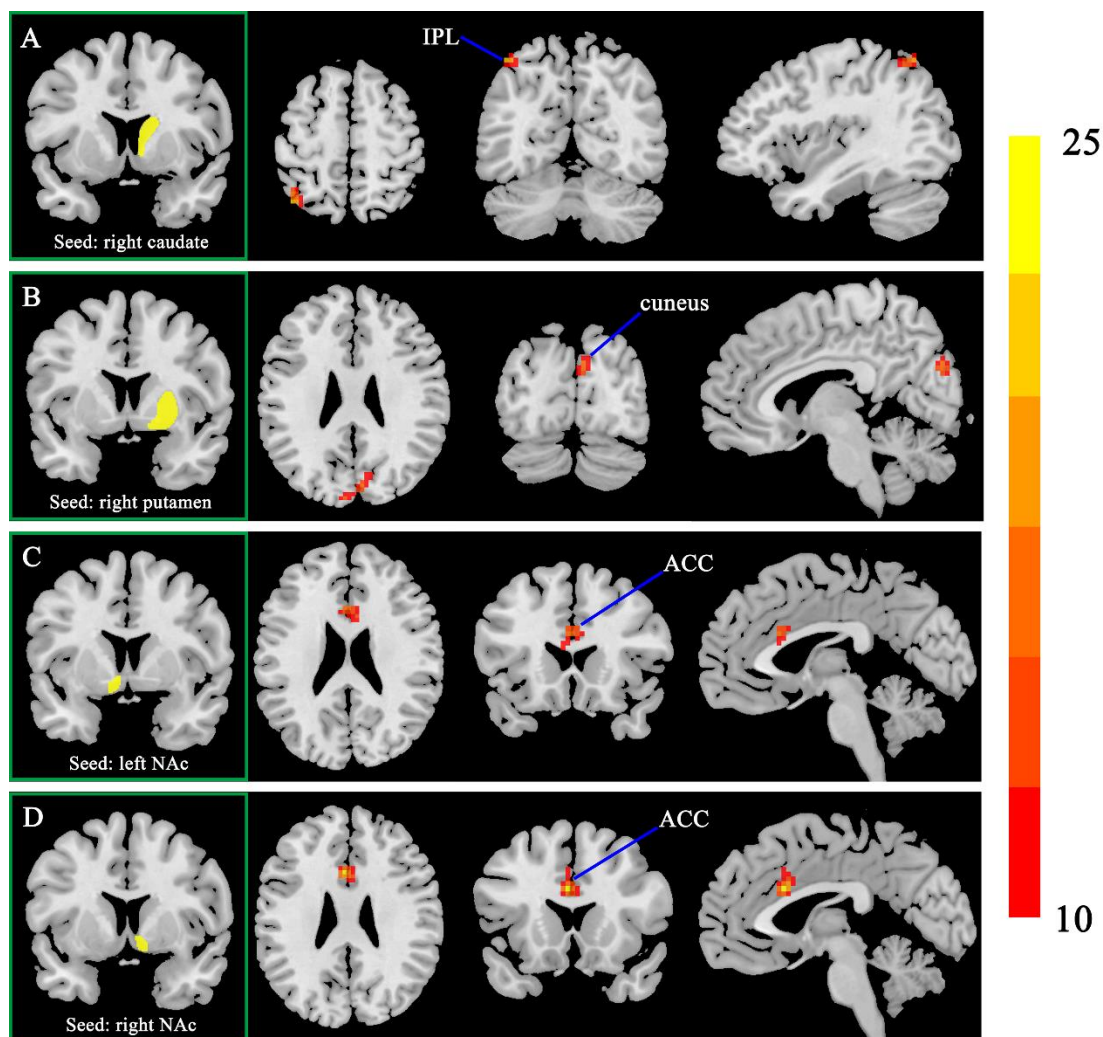
Abbreviation: CN, Cognitively normal; MCI, Mild Cognitive Impairment; WMS-LM, Wechsler memory scale-logical memory; TMT, Trail-Making Test; SVF, Semantic Verbal Fluency; FD, framewise displacement.

^{a-d}Post hoc analysis further revealed the source of ANOVA difference (^a CN non-smokers vs. MCI non-smokers; ^b CN non-smokers vs. MCI smokers; ^c CN smokers vs. MCI non-smokers; ^d CN smokers vs. MCI smokers) (*p* < 0.05, significant difference between the two groups)

Supplementary Table 2. Smoking status × disease interaction on rsFC of the striatal subregions.

Seeds	Interaction effect regions	Peak MNI coordinate			Peak intensity	Cluster voxels
		X	Y	Z		
Right caudate	Left IPL	-39	-63	57	18.5048	21
Right putamen	Bilateral cuneus	6	-81	27	15.9433	54
Left NAc	Bilateral ACC	-3	21	24	15.6185	40
Right NAc	Bilateral ACC	-3	18	27	22.7503	49

The statistical threshold was set at $p < 0.005$ with a cluster-level of $p < 0.05$ (two-tailed, GRF corrected). IPL, inferior parietal lobule; ACC, anterior cingulate cortex.



Supplementary Fig. 1. The interaction effects of smoking status $\times$ disease on rsFC of the striatal subregions after PSM. (A) between right caudate and left IPL; (B) between right putamen and bilateral cuneus; (C) between left NAc and bilateral ACC; and (D) between right NAc and bilateral ACC. IPL, inferior parietal lobule; NAc, nucleus accumbens; ACC, anterior cingulate cortex. The statistical threshold was set at $p < 0.005$ with a cluster-level of $p < 0.05$ (two-tailed, GRF corrected).