

Table S1. Multi-adjusted associations of antidepressant use with 10-year cognitive changes in participants without past major depressive episode

	MMSE		BVRT		Isaac's test		TMTA		TMTB	
	$\sqrt{30 - MMSE}$		$\sqrt{15 - BVRT}$				$\ln(TMTA)$		$\ln(TMTB)$	
	N=6036		N=5964		N=5981		N=5099		N=4928	
	β (SE)	p-value	β (SE)	p-value	β (SE)	p-value	β (SE)	p-value	β (SE)	p-value
Antidepressant		0.95		0.30		0.0007		0.001		0.10
TCAs	0.006 (0.090)	0.95	0.104 (0.077)	0.18	-4.545 (1.370)	0.0009	0.191 (0.063)	0.002	0.050 (0.075)	0.51
SSRIs	-0.005 (0.058)	0.93	0.061 (0.050)	0.22	-1.971 (0.899)	0.03	0.102 (0.040)	0.01	0.115 (0.048)	0.02
Others	-0.065 (0.111)	0.56	-0.054 (0.095)	0.57	-2.472 (1.735)	0.15	0.055 (0.078)	0.48	-0.016 (0.093)	0.87
Antidepressant*time		0.66		0.72		0.41		0.56		0.26
TCAs*time	0.019 (0.022)	0.40	0.007 (0.020)	0.71	0.395 (0.236)	0.09	-0.016 (0.011)	0.18	-0.006 (0.015)	0.67
SSRIs*time	0.012 (0.013)	0.35	0.012 (0.012)	0.29	-0.012 (0.140)	0.93	0.001 (0.006)	0.92	-0.015 (0.008)	0.06
Others*time	0.002 (0.025)	0.94	0.006 (0.022)	0.78	-0.063 (0.275)	0.82	0.005 (0.013)	0.69	-0.008 (0.016)	0.61

Models adjusted for time, age, gender, center, education, body mass index, alcohol, caffeine, fruit and vegetable consumption, activity limitations, visual deficiency, respiratory disease, diabetes, ischemic pathology, ApoE4 genotype, benzodiazepines, anticholinergic drugs, other psychotropic drugs, number of other drugs, depressive symptoms, anxiety symptoms as well as time by age, time by center, time by education and time by ApoE4 interactions.

BVRT: Benton's Visual Retention Test, MMSE: Mini Mental State Examination, SE: standard error, SSRI: selective serotonin reuptake inhibitors, TCA: tricyclic antidepressant, TMTA and TMTB: Trail Making Tests A and B

Table S2. Multi-adjusted associations of antidepressant use with 10-year cognitive changes in participants without incident dementia

	MMSE		BVRT		Isaac's test		TMTA		TMTB	
	$\sqrt{30 - MMSE}$		$\sqrt{15 - BVRT}$				$\ln(TMTA)$		$\ln(TMTB)$	
	N=6681		N=6594		N=6622		N=5577		N=5408	
	β (SE)	p-value	β (SE)	p-value	β (SE)	p-value	β (SE)	p-value	β (SE)	p-value
Antidepressant		0.59		0.23		0.0007		0.08		0.66
TCAs	-0.019 (0.071)	0.79	0.114 (0.061)	0.06	-4.272 (1.073)	<0.0001	0.085(0.048)	0.08	0.006 (0.056)	0.91
SSRIs	-0.057 (0.052)	0.27	0.035 (0.044)	0.44	-0.776 (0.793)	0.33	0.056 (0.036)	0.12	0.051 (0.043)	0.23
Others	-0.078 (0.092)	0.40	0.040 (0.078)	0.61	-0.975 (1.413)	0.49	0.077 (0.063)	0.22	-0.025 (0.075)	0.74
Antidepressant*time		0.78		0.63		0.02		0.60		0.76
TCAs*time	0.011 (0.015)	0.48	0.007 (0.014)	0.59	0.420 (0.162)	0.01	-0.010 (0.008)	0.20	-0.005 (0.010)	0.63
SSRIs*time	0.008(0.011)	0.46	0.012 (0.010)	0.24	0.209 (0.121)	0.09	-0.003 (0.005)	0.64	0.003 (0.007)	0.64
Others*time	0.005 (0.020)	0.82	0.006 (0.019)	0.76	-0.111 (0.221)	0.62	-0.0003 (0.010)	0.98	-0.012(0.014)	0.40

Models adjusted for time, age, gender, center, education, body mass index, alcohol, caffeine, fruit and vegetable consumption, activity limitations, visual deficiency, respiratory disease, diabetes, ischemic pathology, ApoE4 genotype, benzodiazepines, anticholinergic drugs, other psychotropic drugs, number of other drugs, depressive symptoms, anxiety symptoms as well as time by age, time by center, time by education and time by ApoE4 interactions.

BVRT: Benton's Visual Retention Test, MMSE: Mini Mental State Examination, SE: standard error, SSRI: selective serotonin reuptake inhibitors, TCA: tricyclic antidepressant, TMTA and TMTB: Trail Making Tests A and B

Table S3. Multi-adjusted associations of antidepressant use with 10-year cognitive changes without censoring of cognition after treatment change

	MMSE		BVRT		Isaac's test		TMTA		TMTB	
	$\sqrt{30 - MMSE}$		$\sqrt{15 - BVRT}$				$\ln(TMTA)$		$\ln(TMTB)$	
	N=7365		N=7263		N=7293		N=6380		N=6128	
	β (SE)	p-value	β (SE)	p-value	β (SE)	p-value	β (SE)	p-value	β (SE)	p-value
Antidepressant		0.34		0.01		0.0002		0.02		0.54
TCAs	0.035 (0.063)	0.58	0.156 (0.053)	0.003	-3.98 (0.96)	<0.0001	0.080 (0.037)	0.03	0.022(0.043)	0.61
SSRIs	-0.027 (0.047)	0.57	0.062 (0.040)	0.12	-1.33 (0.73)	0.07	0.067 (0.029)	0.03	0.047 (0.034)	0.17
Others	-0.139 (0.084)	0.10	0.033 (0.071)	0.65	-0.77 (1.32)	0.56	0.016 (0.051)	0.75	-0.008 (0.060)	0.90
Antidepressant*time		0.19		0.31		0.51		0.58		0.75
TCAs*time	0.009 (0.011)	0.39	0.0003 (0.010)	0.98	0.12 (0.12)	0.31	-0.005 (0.005)	0.35	0.003 (0.007)	0.61
SSRIs*time	0.014 (0.008)	0.10	0.014 (0.007)	0.06	-0.09 (0.09)	0.32	0.002 (0.004)	0.65	0.001 (0.005)	0.86
Others*time	0.018 (0.015)	0.23	0.003 (0.013)	0.78	-0.09 (0.17)	0.60	0.007 (0.007)	0.35	-0.008 (0.009)	0.35