

Mushroom frequency intake	Cognitive test								
	SF-EMSE	SF-MMSE	HVLT	NART	CANTAB-PAL	PW	PM	VSTs	VSTc
1. Never/rare intake (n=935)	32.65 (0.08) ^{2,3,4}	13.29 (0.05) ^{3,4}	24.32 (0.16) ^{2,3,4}	29.88 (0.31) ^{2,3,4}	15.56 (0.13)	13.19 (0.16) ^{3,4}	1.41 (0.03) ^{3,4}	672 (4.68) ^{3,4}	2197 (12.52)
2. 1-3 portions/month (n=1381)	32.94 (0.07) ¹	13.41 (0.04)	25.39 (0.13) ¹	32.87 (0.26) ^{1,4}	15.81 (0.11)	13.53 (0.13)	1.47 (0.02)	659 (3.84)	2176 (10.26)
3. 1 portion/week (n=1642)	33.04 (0.06) ¹	13.46 (0.04) ¹	25.63 (0.12) ¹	33.75 (0.24) ¹	15.97 (0.10)	13.76 (0.12) ¹	1.51 (0.02) ¹	655 (3.52) ¹	2186 (9.41)
4. >1 portion/week (n=1460)	33.05 (0.07) ¹	13.50 (0.04) ¹	25.60 (0.13) ¹	34.22 (0.25) ^{1,2}	15.93 (0.10)	13.78 (0.13) ¹	1.52 (0.02) ¹	654 (3.73) ¹	2168 (9.99)
Mushroom ANCOVA p value	0.001*	0.010*	<0.001*	<0.001*	0.063	0.019*	0.002*	0.020*	0.285

Table S1. Mean cognitive scores (estimated marginal means (SE) for each cognitive test based on mushroom intake frequency, n=5418, with age, gender, physical activity status, and BMI status included as covariates. ^{1,2,3,4} indicates significant Bonferroni-corrected pairwise comparison with the corresponding mushroom frequency intake group (p<0.05). * indicates significant p value (p<0.05). Abbreviations used: SF-EMSE: Extended Mental State Examination-short-form, HVLT: Hopkins Verbal Learning Task, NART: National Adult Reading Test, CANTAB-PAL: Cambridge Neuropsychological Test Automated Battery-Paired Associate Learning test, PM: Prospective memory test, PW: Pairwise test, VST(c,s): Visual Sensitivity test (c: complex, s: simple).

Mushroom frequency intake	Cognitive test								
	SF-EMSE	SF-MMSE	HVLT	NART	CANTAB-PAL	PW	PM	VSTs	VSTc
1. Never/rare intake (n=897)	32.68 (0.08) ^{3,4}	13.29 (0.05) ^{3,4}	24.36 (0.17) ^{2,3,4}	20.15 (0.32) ^{2,3,4}	15.59 (0.13) ⁴	13.30 (0.17)	1.42 (0.03) ^{3,4}	668 (4.73)	2190 (12.85)
2. 1-3 portions/month (n=1349)	32.93 (0.07)	13.40 (0.04)	25.41 (0.14) ¹	17.15 (0.26) ^{1,4}	15.81 (0.11)	13.56 (0.14)	1.48 (0.02)	660 (3.83)	2174 (10.40)
3. 1 portion/week (n=1602)	33.06 (0.06) ¹	13.47 (0.04) ¹	25.67 (0.12) ¹	16.23 (0.24) ¹	15.97 (0.10)	13.82 (0.12)	1.51 (0.02) ¹	655 (3.50)	2185 (9.50)
4. >1 portion/week (n=1424)	33.11 (0.07) ¹	13.54 (0.04) ¹	25.68 (0.13) ¹	15.49 (0.26) ^{1,2}	16.05 (0.11) ¹	13.84 (0.13)	1.53 (0.02) ¹	652 (3.79)	2169 (10.28)
Mushroom ANCOVA p value	0.001*	0.002*	<0.001*	<0.001*	0.040*	0.043*	0.010*	0.055	0.523
Fruit covariate p value	0.072	0.385	0.644	0.003*	0.528	0.617	0.284	0.013*	0.330
Vegetable (excl. mushroom) covariate p value	0.001*	0.001*	0.035*	<0.001*	0.004*	0.350	0.511	0.005*	0.886

Table S2. Mean cognitive scores (estimated marginal means (SE) for each cognitive test based on mushroom intake frequency, n=5272, with age, gender, physical activity status, BMI status, daily fruit intake, and daily vegetable intake (excluding daily mushroom intake) included as covariates. Covariate significance is included for fruit intake and vegetable intake. ^{1,2,3,4} indicates significant Bonferroni-corrected pairwise comparison with the corresponding mushroom frequency intake group (p<0.05). * indicates significant p value (p<0.05). Abbreviations used: SF-EMSE: Extended Mental State Examination-short-form, HVLT: Hopkins Verbal Learning Task, NART: National Adult Reading Test, CANTAB-PAL: Cambridge Neuropsychological Test Automated Battery-Paired Associate Learning test, PM: Prospective memory test, PW: Pairwise test, VST(c,s): Visual Sensitivity test (c: complex, s: simple).