

Supplementary Online Content

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eTable 1. Mentally Stimulating Activities and Risk of Incident Amnestic/Nonamnestic MCI

eTable 2. Interaction Between Mentally Stimulating Activities and *APOE* ϵ 4 Status on the Risk of Incident MCI

This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. Mentally Stimulating Activities and Risk of Incident Amnestic/Nonamnestic MCI

Variable	No. at Risk	No. With Incident MCI	Median Follow-up, y	HR (95% CI) ¹	P Value	HR (95% CI) ²	P Value
Amnestic MCI							
Reading books	1083	154	4.1	0.81 (0.63, 1.03)	.08	0.84 (0.66, 1.08)	.17
Playing games	1108	162	4.1	0.83 (0.66, 1.05)	.12	0.88 (0.69, 1.11)	.27
Craft activities	502	69	4.1	0.76 (0.58, 1.00)	.048	0.82 (0.62, 1.08)	.15
Computer activities	1077	133	4.1	0.75 (0.59, 0.95)	.019	0.79 (0.62, 1.01)	.06
Social activities	767	98	4.1	0.74 (0.58, 0.95)	.017	0.75 (0.59, 0.96)	.023
Non-amnestic MCI							
Reading books	1083	44	4.1	0.72 (0.46, 1.12)	.15	0.80 (0.51, 1.25)	.33
Playing games	1108	45	4.1	0.69 (0.45, 1.05)	.08	0.77 (0.50, 1.19)	.24
Craft activities	502	23	4.1	0.82 (0.51, 1.34)	.43	0.95 (0.58, 1.55)	.83
Computer activities	1077	28	4.1	0.42 (0.26, 0.67)	<.001	0.45 (0.29, 0.73)	<.001
Social activities	767	31	4.1	0.80 (0.52, 1.24)	.32	0.81 (0.52, 1.26)	.35

Abbreviations: HR, hazard ratio; CI, confidence interval.

¹Model adjusted for age (scale), sex, and education. ²Model also adjusted for medical comorbidity, depression, and APOE ε4 status. No. at risk refers to the number of participants (of the total sample size of 1929) that reported engaging in a mentally stimulating activity with a frequency of at least 1-2 times per week or more. No. with incident MCI refers to the number of participants (of the total sample size of 1929) that developed incident MCI.

eTable 2. Interaction Between Mentally Stimulating Activities and APOE $\epsilon 4$ Status on the Risk of Incident MCI

Sample	No. at Risk	No. With Incident MCI	Median Follow-up, y	HR (95% CI) ¹	P Value	Multiplicative Interaction P Value	Additive Interaction P Value
APOE $\epsilon 4$ -BOOKS-	616	148	4.0	1.00 (ref. group)		.44	.73
APOE $\epsilon 4$ +BOOKS-	229	67	3.4	1.55 (1.16, 2.07)	.003		
APOE $\epsilon 4$ -BOOKS+	792	162	4.2	0.80 (0.63, 1.01)	.06		
APOE $\epsilon 4$ +BOOKS+	283	77	3.4	1.45 (1.09, 1.93)	.011		
APOE $\epsilon 4$ -GAMES-	593	141	4.1	1.00 (ref. group)		.72	.42
APOE $\epsilon 4$ +GAMES-	224	69	3.2	1.76 (1.31, 2.35)	<.001		
APOE $\epsilon 4$ -GAMES+	815	169	4.2	0.80 (0.64, 1.01)	.06		
APOE $\epsilon 4$ +GAMES+	288	75	3.5	1.31 (0.99, 1.74)	.06		
APOE $\epsilon 4$ -CRAFT-	1030	239	4.1	1.00 (ref. group)		.048	.21
APOE $\epsilon 4$ +CRAFT-	389	111	3.5	1.50 (1.19, 1.88)	<.001		
APOE $\epsilon 4$ -CRAFT+	378	71	4.5	0.65 (0.50, 0.85)	.002		
APOE $\epsilon 4$ +CRAFT+	123	33	3.0	1.56 (1.08, 2.26)	.017		
APOE $\epsilon 4$ -COMPUTER-	613	178	3.9	1.00 (ref. group)		.71	.30
APOE $\epsilon 4$ +COMPUTER-	236	83	3.2	1.74 (1.33, 2.27)	<.001		
APOE $\epsilon 4$ -COMPUTER+	795	132	4.2	0.73 (0.58, 0.92)	.009		
APOE $\epsilon 4$ +COMPUTER+	276	61	3.7	1.17 (0.87, 1.59)	.30		
APOE $\epsilon 4$ -SOCIAL-	837	202	4.1	1.00 (ref. group)		.20	.088
APOE $\epsilon 4$ +SOCIAL-	318	99	3.1	1.86 (1.46, 2.38)	<.001		
APOE $\epsilon 4$ -SOCIAL+	571	108	4.2	0.83 (0.66, 1.05)	.12		
APOE $\epsilon 4$ +SOCIAL+	194	45	3.9	1.17 (0.85, 1.63)	.34		

Abbreviations: HR, hazard ratio; CI, confidence interval; APOE $\epsilon 4$ -/ APOE $\epsilon 4$ + , APOE $\epsilon 4$ non-carrier/ carrier; Books+/Games+/Craft+/Computer+/Social+, reported engaging in reading books/playing

games/craft activities/computer activities/social activities at least 1-2 times per week or more; Books-/Games-/Craft-/Computer-/Social-, reported not engaging in reading books/playing games/craft activities/computer activities/social activities (2-3 times a month or less).

¹Model adjusted for age (scale), sex, and education. Additional adjustment for medical comorbidity and depression did not significantly alter the results (data not shown). No. at risk refers to the number of participants (of the total sample size of 1929) that reported engaging in a mentally stimulating activity. No. with incident MCI refers to the number of participants (of the total sample size of 1929) that developed incident MCI.