

Supplemental Online Content

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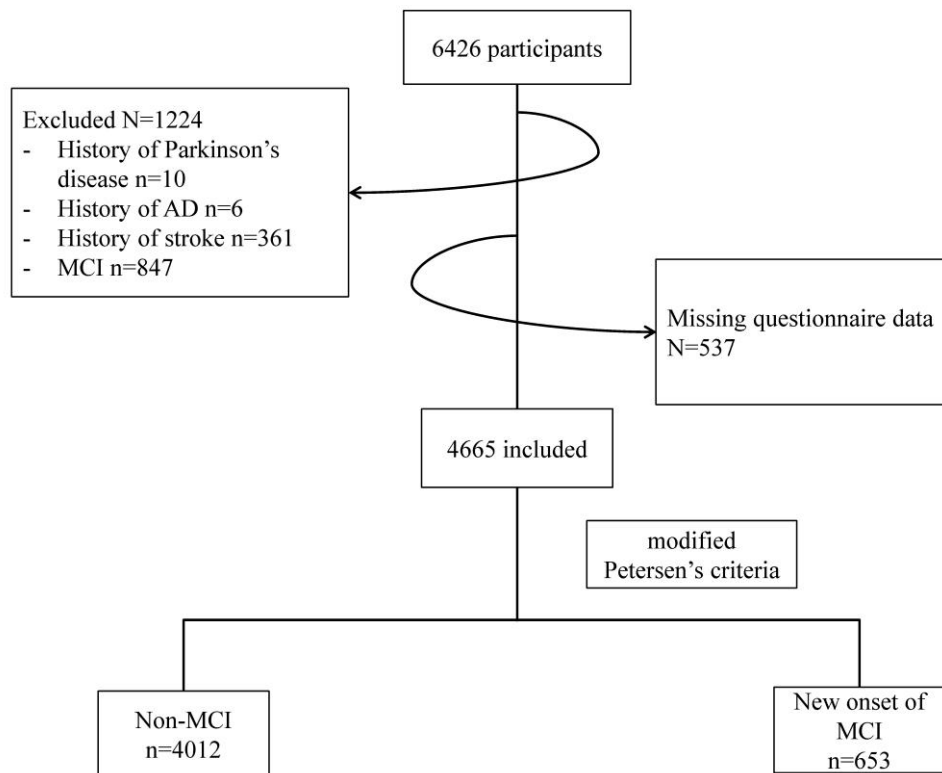
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This supplemental material has been provided by the authors to give readers additional information about their work.



eFigure. Flowchart of Study Participants.

AD, Alzheimer's disease; MCI, mild cognitive impairment.

eTable 1. The Frequency of Missing Variables

Variables	Missing (%)
Body mass index	1.51
Baseline mild cognitive impairment information	0.12
Lost to follow-up	0.33
Smoking status	0.54
Alcohol consumption	0.82
Fruit intake	0.75
Salt intake	2.32
Cooking oil consumption	0.44
Cereal intake	1.04
Vegetable intake	3.38
Egg intake	0.17
Meat intake	3.31
Physical activities	1.12

eTable 2. The Longitudinal Association Between Lifestyle Factors and MCI

Lifestyle Characteristics	Univariate Model		Multivariable Model 1 ^a		Multivariable Model 2 ^b	
	HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value
Healthy diet		.05		.01		.02
Yes	1 [Reference]		1 [Reference]		1 [Reference]	
No	1.24 (1.00-1.55)		1.34 (1.07-1.67)		1.31 (1.04-1.63)	
Regular physical activity		<.001		<.001		<.001
Yes	1 [Reference]		1 [Reference]		1 [Reference]	
No	2.12 (1.81-2.49)		2.00 (1.70-2.35)		2.11 (1.79-2.48)	
Limited alcohol drinking		<.001		.07		.23
Yes	1 [Reference]		1 [Reference]		1 [Reference]	
No	1.62 (1.33-1.97)		1.22 (0.98-1.51)		1.14 (0.92-1.42)	
Non-current smoking		<.001		.004		.02
Yes	1 [Reference]		1 [Reference]		1 [Reference]	
No	1.46 (1.24-1.70)		1.30 (1.09-1.55)		1.25 (1.04-1.49)	

^a Multivariable model 1 adjusted for sex, age, education levels, BMI, income, hypertension, diabetes and living alone.

^b Multivariable model 2 additionally adjusted weighted genetic risks and lifestyle factors (smoking status, alcohol consumption, physical activity and dietary intake) based on multivariable model 1.

eTable 3. Risk of MCI According to Unweighted Lifestyle Categories and Weighted Genetic Risks^a

Subgroup	MCI / Non-MCI (653 / 4012)	HR (95% CI)	P Value	P for trend
Low genetic risk				<.001
Healthy lifestyle	62 / 1236	1 [Reference]		
Unhealthy lifestyle	333 / 1610	3.60 (2.73-4.74)	<.001	
High genetic risk				
Healthy lifestyle	106 / 502	3.34 (2.44-4.58)	<.001	
Unhealthy lifestyle	152 / 664	4.16 (3.08-5.62)	<.001	

^a Model adjusted for sex, age, education levels, BMI, income, hypertension, diabetes and living alone.

eTable 4. Risk of MCI According to Weighted Lifestyle Categories and Unweighted Genetic Risks^a

Subgroup	MCI / Non-MCI (653 / 4012)	HR (95% CI)	P Value	P for trend
Low genetic risk				<.001
Healthy lifestyle	49 / 1146	1 [Reference]		
Unhealthy lifestyle	259 / 1316	4.78 (3.52-6.49)	<.001	
High genetic risk				
Healthy lifestyle	182 / 769	4.39 (3.20-6.02)	<.001	
Unhealthy lifestyle	163 / 781	5.68 (4.12-7.83)	<.001	

^a Model adjusted for sex, age, education levels, BMI, income, hypertension, diabetes and living alone.

eTable 5. Risk of MCI According to Unweighted Lifestyle Categories and Unweighted Genetic Risks^a

Subgroup	MCI / Non-MCI (653 / 4012)	HR (95% CI)	P Value	P for trend
Low genetic risk				<.001
Healthy lifestyle	24 / 1062	1 [Reference]		
Unhealthy lifestyle	284 / 1400	7.33 (4.82-11.16)	<.001	
High genetic risk				
Healthy lifestyle	144 / 676	7.02 (4.56-10.82)	<.001	
Unhealthy lifestyle	201 / 874	8.96 (5.85-13.74)	<.001	

^a Model adjusted for sex, age, education levels, BMI, income, hypertension, diabetes and living alone.

eTable 6. Risk of MCI According to Weighted Lifestyle Categories^a and Weighted Genetic Risks^b

Subgroup	MCI / Non-MCI (653 / 4012)	HR (95% CI)	P Value	P for trend
Low genetic risk				<.001
Healthy lifestyle	119 / 1565	1 [Reference]		
Unhealthy lifestyle	276 / 1281	2.79 (2.25- 3.47)	<.001	
High genetic risk				
Healthy lifestyle	151 / 668	2.41 (1.89-3.07)	<.001	
Unhealthy lifestyle	107 / 498	3.23 (2.48-4.20)	<.001	

^a Healthy lifestyle including non-current smoking, limited alcohol drinking, regular physical activity, healthy diet and normal BMI. ^b Model adjusted for sex, age, education levels, income, hypertension, diabetes and living alone.

eTable 7. Risk of MCI According to Lifestyle Categories and Genetic Risks Stratified by Sex and Age

Subgroup	Male (n=2119) ^a		Female (n=2546) ^a		Age <70 (n=3042) ^b		age≥70 (n=1623) ^b	
	HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value
Low genetic risk								
Healthy lifestyle	1 [Reference]		1 [Reference]		1 [Reference]		1 [Reference]	
Unhealthy lifestyle	2.41 (1.81-3.22)	<.001	4.08 (2.76-6.02)	<.001	2.73 (2.06-3.63)	<.001	3.80 (2.53-5.71)	<.001
High genetic risk								
Healthy lifestyle	1.95 (1.38-2.77)	<.001	3.93 (2.60-5.96)	<.001	2.52 (1.82-3.48)	<.001	2.98 (1.88-4.71)	<.001
Unhealthy lifestyle	2.71 (1.92-3.84)	<.001	5.55 (3.58-8.59)	<.001	3.34 (2.38-4.71)	<.001	4.39 (2.79-6.90)	<.001
P for trend	<.001		<.001		<.001		<.001	

^a Model adjusted for age, education levels, BMI, income, hypertension, diabetes and living alone.

^b Model adjusted for sex, education levels, BMI, income, hypertension, diabetes and living alone.

eTable 8. Risk of MCI According to Lifestyle Categories and Genetic Risks Stratified by Education Levels^a

Subgroup	Elementary school or below (n=2477)			Junior high school and above (n=2188)		
	<i>HR (95% CI)</i>	<i>P Value</i>	<i>P for trend</i>	<i>HR (95% CI)</i>	<i>P Value</i>	<i>P for trend</i>
Low genetic risk			<.001			<.001
Healthy lifestyle	1 [Reference]			1 [Reference]		
Unhealthy lifestyle	6.05 (3.759-9.76)	<.001		2.24 (1.71-2.94)	<.001	
High genetic risk						
Healthy lifestyle	4.99 (2.96-8.40)	<.001		2.01 (1.47-2.74)	<.001	
Unhealthy lifestyle	7.70 (4.55-13.01)	<.001		2.52 (1.82-3.48)	<.001	

^a Model adjusted for age, sex, BMI, income, hypertension, diabetes and living alone.

eTable 9. Risk of MCI According to Lifestyle Categories and Genetic Risks Stratified by Hypertension and Diabetes

Subgroup	Hypertension (n=3147) ^a		Non-hypertension (n=1518) ^a		Diabetes (n=1385) ^b		Non-diabetes (n=3280) ^b	
	HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value	HR (95% CI)	P Value
Low genetic risk								
Healthy lifestyle	1 [Reference]		1 [Reference]		1 [Reference]		1 [Reference]	
Unhealthy lifestyle	2.89 (2.21-3.78)	<.001	3.20 (2.01-5.09)	<.001	2.71 (1.79-4.10)	<.001	3.23 (2.44-4.28)	<.001
High genetic risk								
Healthy lifestyle	2.53 (1.86-3.43)	<.001	2.92 (1.73-4.94)	<.001	2.26 (1.44-3.55)	<.001	2.85 (2.06-3.95)	<.001
Unhealthy lifestyle	3.27 (2.39-4.48)	<.001	4.15 (2.42-7.10)	<.001	3.19 (1.98-5.14)	<.001	3.80 (2.73-5.28)	<.001
P for trend	<.001		<0.001		<0.001		<0.001	

^a Model adjusted for age, sex, education levels, BMI, income, diabetes and living alone.

^b Model adjusted for age, sex, education levels, BMI, income, hypertension and living alone.

eTable 10. The Longitudinal Association Among Lifestyle Score, Genetic Risk Score, and MCI^a

Scores	Univariate Model		Multivariable Model	
	<i>HR (95% CI)</i>	<i>P Value</i>	<i>HR (95% CI)</i>	<i>P Value</i>
Weighted lifestyle score	1.42 (1.33-1.51)	<.001	1.37 (1.29-1.47)	<.001
Weighted genetic risk score	1.61 (1.42-1.83)	<.001	1.51 (1.33-1.71)	<.001
Unweighted lifestyle score	1.48 (1.37-1.61)	<.001	1.44 (1.32-1.58)	<.001
Unweighted genetic risk score	1.44 (1.30-1.59)	<.001	1.38 (1.24-1.52)	<.001

^a Model adjusted for sex, age, education levels, BMI, income, hypertension, diabetes and living alone.