Supplemental Materials

Supplemental Tables

Online Table 1: Mean performances and standard deviation of the groups in the 2,3,4,5,6-profile models of the latent profile analysis in the Cardiovascular Health Study

	2-profile Model				
	1	2			
N	670	4406			
DSST	32.1±14.2	39.3±13.6			
DSST, z-score	-0.46±1.02	0.07±0.98			
CESD	15.1±3.9	4±3.1			
Gait speed, m/sec	0.7±0.2	0.9±0.2			
	3-profile Model				
	1	2	3		
N	1145	3691	240		
DSST	32.4±14.1	40.5±13.2	34.4±14		
DSST, z-score	-0.43±1.02	0.15±0.95	-0.29±1		
CESD	10.3±2.3	3.1±2.3.	19.4±3.1		
Gait speed, m/sec	0.8±0.2	0.9±0.2	0.8±0.2		
	4-profile Model				
	1	2	3	4	
N	3133	188	945	810	
DSST	43.6±11.3	33.5±13.9	34.9±13.5	23±9.8	
DSST, z-score	0.38±0.82	-0.35±0.99	-0.25±0.97	-1.1±0.7	
CESD	3±2.4	20.3±2.9	11.4±2.3	4.8±2.4	
Gait speed, m/sec	1±0.2	0.7±0.2	0.8±0.2	0.6±0.2	
	5-profile Model				
	1	2	3	4	5
N	196	351	1148	2763	618
DSST	33.6±13.3	22.3±9.8	25.8±9.8	44.9±10.8	42.9±10.7
DSST, z-score	-0.35±0.96	-1.16±0.71	-0.91±0.7	0.47±0.78	0.32±0.77
CESD	20.2±3	11.6±2.1	4.6±2.4	2.7±2.2	11.1±2.3
Gait speed, m/sec	0.73±0.2	0.62±0.2	0.7±0.2	1±0.2	0.9±0.2
DSST: Digit Symbol Substitution Test; CESD: Center for Epidemiological Depression Scale					

	Models* without WMH				Models** with WMH and vascular factor			
Online Table 2: Associations of other vascular factors with being impaired in the three domains of mobility, cognition and mood and the role of white matter hyperintensities								
	HR	**95%CI**	**95%CI**	*P-VALUE*	**HR**	**95%CI**	**95%CI**	*P-VALUE*
Diabetes	1.62	1.27	2.06	*0.0001*	1.55	1.16	2.07	*0.003*
Coronary Heart Disease	1.26	1.03	1.54	*0.023*	1.32	1.05	1.67	*0.021*
Congestive Heart Failure	1.45	1.20	1.74	*0.0001*	1.43	1.15	1.78	*0.018*
WMH: White matter hyperintensities								
*A separate model was created for each vascular factor and models were adjusted for: age, gender, race, education, cigarette smoking, stroke, and total KCALS physical activity								
**: For each vascular factor, we present the HR from the model including the vascular factor, WMH, and the above covariates.								
If the p value between the model with and without WMH becomes >0.05 we considered WMH to be a mediator								

	Unadjusted		Adjusted*	
	HR	*P-VALUE*	**HR**	*P-VALUE*
Separate Models				
Hypertension	0.93, 95% CI (.80-1.08)	*0.36*	.88, 95% CI (0.76-1.03)	*0.10*
WMH grade	1.08, 95% CI (1.03-1.13)	0.0017	1.05, 95% CI (1.00-1.11)	0.05
Combined Models**				
Hypertension	0.88, 95% CI (0.75-1.03)	0.11	0.85, 95% CI (0.72-1.01)	*0.07*
WMH grade	1.08, 95%CI (1.03-1.13)	0.0009	1.06, 95%CI (1.01-1.11)	*0.03*

Online Table 3: The association of hypertension and cerebral white matter hyperintensities with the remainder group

WMH: Cerebral white matter hyperintensities; HR: Hazard Ratio; CI: Confidence interval

*Adjusted for: age, gender, ace, education, cigarette smoking, stroke, and total KCALS physical activity (antihypertensives in the WMH model).

**: Combined models include WMH and hypertension in the same model whereas separate model includes only WMH or hypertension