Supplemental Online Content

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

eTable 1. **Three-year change in individual cognitive tests of participants in the CLSA cohort and by muscularity (complete case analysis)**

Cognitive test scores	All	Without low ALM	With low ALM	P
No. (%)	5331	4339 (81.4)	992 (18.6)	
Memory				
Rey immediate recall, n words (0-15)	0.4 (1.9)	0.5 (1.9)	0.3 (1.9)	0.07
Rey delayed recall, n words (0-15)	0.3 (1.9)	0.3 (1.9)	0.2 (1.9)	0.30
Executive functions				
Animal naming, n words	-0.3 (4.4)	-0.3 (4.4)	-0.5 (4.3)	0.10
MAT, (0-51)	-1.1 (6.6)	-0.9 (6.6)	-1.8 (6.4)	<0.001
F-A-S total, n words	0.4 (8.0)	0.5 (7.9)	-0.2 (8.2)	0.02
Stroop's high interference, s	0.02 (0.7)	0.02 (0.72)	0.03 (0.75)	0.58
Psychomotor speed				
Choice reaction time, ms	-3.2 (179.5)	-5.5 (178.8)	6.6 (182.1)	0.06

Values are Mean (SD). P values are from t-test. An increase in the Stroop's high interference and choice reaction time indicates a decrease in cognitive performance. MAT, Mental Alternation Test.

eTable 2.   **Linear regression models of the association between low muscularity and cognitive decline over 3 years by cognitive domain (from multiple imputations)**

	Model 1		Model 2		Model 3	
	β coefficient (95% CI)	P	β coefficient (95% CI)	P	β coefficient (95% CI)	P
Memory	-0.025 (-0.075, 0.025)	0.31	-0.017 (-0.067, 0.033)	0.49	-0.008 (-0.058, 0.042)	0.73
Executive function	-0.047 (-0.077, -0.017)	0.002	-0.042 (-0.072, -0.012)	0.005	-0.034 (-0.064, -0.004)	0.026
Psychomotor speed	-0.051 (-0.096, -0.006)	0.03	-0.044 (-0.091, 0.003)	0.06	-0.026 (-0.073, 0.021)	0.28

Unstandardized beta coefficients from multiple imputations, as illustrated in Figure 3.

eTable 3.   **Linear regression models of the association between low muscularity and cognitive decline over 3 years by cognitive domain (complete case analysis)**

	Model 1		Model 2		Model 3	
	β coefficient (95% CI)	P	β coefficient (95% CI)	P	β coefficient (95% CI)	P
Memory	-0.023 (-0.072, 0.026)	0.36	-0.037 (-0.096, 0.022)	0.22	-0.024 (-0.083, 0.035)	0.43
Executive function	-0.051 (-0.082, -0.020)	0.002	-0.056 (-0.093, -0.019)	0.003	-0.045 (-0.082, -0.008)	0.022
Psychomotor speed	-0.065 (-0.115, -0.015)	0.01	-0.048 (-0.108, 0.012)	0.11	-0.023 (-0.084, 0.038)	0.45

Unstandardized beta coefficients.