



Supplementary Figure 1. Flowchart of the study population

Supplementary Table 1. Baseline characteristics of those include in the study sample and those not

Characteristics	Study sample (n=2013)	Individuals excluded from the study (n=1350)	P-value
Age (years)	71 (\pm 9.3)	81 (\pm 11.2)	<0.001
60-78 years	1362 (67.7)	427 (31.6)	<0.001
\geq 78 years	651 (32.3)	923 (68.4)	
Female sex	1273 (63.2)	900 (67.7)	0.008
Living in institutions	19 (0.94)	176 (13.0)	<0.001
Education \geq elementary	1763 (87.8)	961 (73.9)	<0.001
Body mass index (kg/m ²)	25 (\pm 3.8)	24 (\pm 4.6)	<0.001
Smoking status			0.006
Never smoker	924 (46.3)	629 (49.7)	
Former smoker	803 (40.2)	440 (34.9)	
Current smoker	269 (13.5)	196 (15.5)	
Alcohol consumption			<0.001
No or occasional	553 (27.6)	676 (53.4)	
Light to moderate	1089 (54.4)	438 (34.6)	
Heavy	359 (17.9)	151 (11.9)	
Physically active	1572 (78.1)	628 (46.5)	<0.001
MMSE score	28 (\pm 2.3)	24 (\pm 7.9)	<0.001
SBP (mm Hg)	143 (\pm 19.4)	141 (\pm 21.9)	0.008
DBP (mm Hg)	82 (\pm 10.4)	77 (\pm 11.8)	<0.001
Hypertension	1465 (72.8)	1024 (77.1)	0.006
High cholesterol	1061 (54.1)	453 (40.7)	<0.001
Estimated GFR (mL/min/1.73 m ²)	67 (\pm 12.5)	59 (\pm 16.5)	<0.001
Diabetes status			0.006
Normoglycemia	1212 (60.2)	760 (57.2)	
Prediabetes	650 (32.3)	427 (32.2)	
Diabetes	151 (7.5)	141 (10.6)	
Depression and mood disorders	158 (7.85)	152 (11.3)	0.001

Cerebrovascular disease	90 (4.47)	175 (12.9)	<0.001
Peripheral neuropathy	29 (1.44)	20 (1.48)	0.923
Number of cardiovascular diseases			<0.001
0	1644 (81.7)	787 (58.3)	
1	249 (12.4)	308 (22.8)	
2+	120 (5.96)	255 (18.9)	
Chair stand (s)	21 (\pm 21.4)	42 (\pm 30.3)	<0.001
Walking speed (m/s)	1.1 (\pm 0.4)	0.7 (\pm 0.4)	<0.001
ADL disability [#]	46 (2.29)	276 (20.7)	<0.001
IADL disability [¤]	181 (9.2)	584 (45.7)	<0.001

Data are n (%) or means \pm SD.

Abbreviations: MMSE, Mini-Mental State Examination; SBP, systolic blood pressure; DBP, diastolic blood pressure; GFR, glomerular filtration rate; ADL, activity of daily living; IADL, instrumental activity of daily living.

[#]At least one impairment in ADL.

[¤]At least one impairment in IADL.

Supplementary Table 2. Main analysis stratified by age groups

1. Outcome: Chair stand

Glycemic status × time	60-78y		≥78y	
	Beta	95% CI	Beta	95% CI
Normoglycemia × time	Reference		Reference	
Prediabetes × time	-0.03	-0.31 to 0.24	0.19	-0.37 to 0.76
Diabetes × time	1.13	0.49 to 1.77	0.22	-0.94 to 1.38
Controlled × time	0.95	0.18 to 1.72	0.01	-1.23 to 1.24
Uncontrolled × time	1.57	1.57 to 0.49	1.26	-1.68 to 4.21

2. Outcome: Walking speed

Glycemic status × time	60-78y		≥78y	
	Beta	95% CI	Beta	95% CI
Normoglycemia × time	Reference		Reference	
Prediabetes × time	-0.002	-0.005 to 0.002	-0.003	-0.010 to 0.003
Diabetes × time	-0.013	-0.021 to -0.004	0.007	-0.004 to 0.020
Controlled × time	-0.011	-0.012 to -0.001	0.011	-0.001 to 0.024
Uncontrolled × time	-0.017	-0.032 to -0.002	-0.010	-0.040 to 0.022

3. Outcome: Disability score

Glycemic status × time	60-78y		≥78y	
	Beta	95% CI	Beta	95% CI
Normoglycemia × time	Reference		Reference	
Prediabetes × time	0.02	-0.01 to 0.04	0.002	-0.08 to 0.09
Diabetes × time	0.11	0.04 to 0.18	0.088	-0.09 to 0.27
Controlled × time	0.11	0.03 to 0.19	0.003	-0.17 to 0.17
Uncontrolled × time	0.11	0.01 to 0.26	0.418	-0.06 to 0.90

Models were adjusted for baseline age, sex, education, body mass index, physical activity, alcohol consumption, smoking status, systolic blood pressure, high total cholesterol, estimated glomerular filtration rate, depression and mood disorders, cerebrovascular disease, and peripheral neuropathy. For prediabetes as exposures, models were additionally adjusted for incident diabetes. Numbers in bold indicate p value <0.05.

Supplementary Table 3. β -coefficients and 95% confidence intervals (95% CIs) of glycemc status in relation to cardiovascular diseases accumulation over 6 years using mixed-effect models

	Model 1	Model 2
	β (95% CI)	β (95% CI)
Glycemc status		
Normoglycemc	Reference	Reference
Prediabetes	0.11 (0.05 to 0.17)	0.08 (0.02 to 0.14)
Diabetes	0.40 (0.29 to 0.51)	0.36 (0.24 to 0.47)
Controlled	0.31 (0.18 to 0.43)	0.25 (0.13 to 0.38)
Uncontrolled	0.67 (0.47 to 0.87)	0.64 (0.44 to 0.84)
Glycemc status \times time		
Normoglycemc \times time	Reference	Reference
Prediabetes \times time	0.02 (0.003 to 0.028)	0.01 (0.001 to 0.027)
Diabetes \times time	0.03 (0.011 to 0.056)	0.03 (0.011 to 0.057)
Controlled \times time	0.03 (0.005 to 0.056)	0.03 (0.002 to 0.055)
Uncontrolled \times time	0.04 (0.002 to 0.087)	0.05 (0.006 to 0.091)

Model 1 adjusted for baseline age, sex, and education.

Model 2 adjusted for model 1 + body mass index, physical activity, alcohol consumption, smoking status, systolic blood pressure, estimated glomerular filtration rate, high total cholesterol, depression and mood disorders, cerebrovascular diseases, and peripheral neuropathy. Numbers in bold indicate p value <0.05.

Supplementary Table 4-Sensitivity analyses

A. Analysis exclude participants with impairment in chair stand, walking speed, ADL/IADL disability and living in the institutions for each outcome			
Glycemic status × time	Chair stand	Walking speed	Disability score
Normoglycemia × time	Reference	Reference	Reference
Prediabetes × time	0.43 (0.11 to 0.74)	-0.006 (-0.009 to -0.002)	0.07 (0.04 to 0.11)
Diabetes × time	1.56 (0.96 to 2.14)	-0.011 (-0.019 to -0.004)	0.13 (0.06 to 0.20)
Controlled × time	1.15 (0.84 to 2.19)	-0.011 (-0.019 to -0.001)	0.12 (0.04 to 0.19)
Uncontrolled × time	1.67 (0.53 to 2.79)	-0.014 (-0.029 to 0.001)	0.17 (0.04 to 0.29)
B. Analysis exclude participants with cerebrovascular disease and peripheral neuropathy			
Glycemic status × time	Chair stand	Walking speed	Disability score
Normoglycemia × time	Reference	Reference	Reference
Prediabetes × time	0.28 (0.01 to 0.57)	-0.005 (-0.009 to -0.002)	0.04 (0.01 to 0.08)
Diabetes × time	1.09 (0.57 to 1.60)	-0.009 (-0.017 to -0.002)	0.15 (0.09 to 0.22)
Controlled × time	0.99 (0.41 to 1.58)	-0.006 (-0.016 to 0.001)	0.13 (0.06 to 0.21)
Uncontrolled × time	1.38 (0.37 to 2.39)	-0.017 (-0.032 to 0.004)	0.20 (0.08 to 0.32)
C. Analysis exclude participants with MMSE<24 at all waves			
Glycemic status × time	Chair stand	Walking speed	Disability score
Normoglycemia × time	Reference	Reference	Reference
Prediabetes × time	0.31 (0.04 to 0.59)	-0.005 (-0.009 to -0.001)	0.03 (0.01 to 0.06)
Diabetes × time	1.02 (0.55 to 1.59)	-0.009 (-0.016 to -0.002)	0.08 (0.04 to 0.14)
Controlled × time	0.90 (0.37 to 1.55)	-0.009 (-0.017 to -0.001)	0.10 (0.04 to 0.15)
Uncontrolled × time	1.40 (0.40 to 2.39)	-0.011 (-0.025 to 0.003)	0.05 (-0.04 to 0.13)
D. Analysis include those who completed all follow-ups examinations			
Glycemic status × time	Chair stand	Walking speed	Disability score
Normoglycemia × time	Reference	Reference	Reference
Prediabetes × time	0.28 (-0.07 to 0.56)*	-0.003 (-0.007 to 0.000)	0.04 (0.01 to 0.07)
Diabetes × time	0.94 (0.38 to 1.50)	-0.008 (-0.016 to -0.001)	0.06 (0.01 to 0.12)
Controlled × time	0.89 (0.27 to 1.52)	-0.006 (-0.015 to 0.002)	0.07 (0.01 to 0.13)
Uncontrolled × time	1.11 (-0.00 to 2.22)**	-0.016 (-0.032 to -0.001)	0.03 (-0.07 to 0.14)
E. Analysis additionally adjust for albumin level			
Glycemic status × time	Chair stand	Walking speed	Disability score
Normoglycemia × time	Reference	Reference	Reference

Prediabetes × time	0.34 (0.07, 0.62)	-0.006 (-0.009, -0.002)	0.06 (0.03, 0.10)
Diabetes × time	1.08 (0.57, 1.59)	-0.009 (-0.015, -0.002)	0.14 (0.07, 0.21)
Controlled × time	0.96 (0.30, 1.62)	-0.007 (-0.014, 0.001)	0.12 (0.04, 0.19)
Uncontrolled × time	1.48 (0.42, 2.55)	-0.014 (-0.028, -0.001)	0.20 (0.08, 0.33)

*p=0.056 **p=0.051 Model adjusted for age, sex, education, body mass index, physical activity, alcohol consumption, smoking status, systolic blood pressure, high total cholesterol, estimated glomerular filtration rate, depression and mood disorders, cerebrovascular disease, and peripheral neuropathy when it is available. For prediabetes as exposures, models were additionally adjusted for incident diabetes. Numbers in bold indicate p value <0.05.