

Table S1 36-item Frailty Index

Self-reported Frailty Index items	Laboratory Frailty Index items
1. Angina/angina pectoris	26. Pulse rate (60-99 bpm)
2. Heart attack	27. Systolic blood pressure (90-140 mmHg)
3. Coronary heart disease	28. Pulse pressure (30-60 mmHg)
4. Stroke	29. Platelet count SI (150-450 unit 1000 cells/uL)
5. Thyroid condition	30. Blood urea nitrogen (3-20 mg/dL)
6. Cancer	31. Bicarbonate (≤ 28 mmol/L)
7. Arthritis	32. Red cell distribution width ($\leq 14.6\%$)
8. High blood pressure	33. Lactate dehydrogenase (≤ 190 U/L)
9. Diabetes mellitus	34. Alkaline phosphatase (≤ 115 U/L)
10. Weak/failing kidneys	35. Uric acid (M: 240-510, F: 160-430 umol/L)
11. Confusion or inability to remember things	36. Total calcium (2.0-2.5 mmol/L)
12. Difficulty managing money	
13. Difficulty stooping, crouching, kneeling	
14. Difficulty lifting or carrying	
15. Difficulty walking between rooms on same floor	
16. Difficulty standing up from an armless chair	
17. Difficulty getting in and out of bed	
18. Difficulty dressing yourself	

19. Difficulty grasping/holding small objects

20. Difficulty attending social events

21. Self-reported health

22. Frequency of healthcare use

23. Health compared to 1 year ago

24. Overnight hospital stays

25. Medications

F

=

female;

M

=

male

Table S2 Oxidative balance score assignment scheme.

OBS components	Property	Scoring assignment		
		0	1	2
Dietary OBS components				
Vitamin C (mg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Vitamin E (mg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Vitamin B6 (mg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Vitamin B12 (mg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Zinc (mg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Selenium (µg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Carotenoid (µg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Niacin (mg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Copper (mg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Dietary fiber (gm)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Calcium (mg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Magnesium (mg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Total folate (mcg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Riboflavin (mg)	Anti-oxidant	Tertile 1	Tertile 2	Tertile 3
Iron (mg)	Pro-oxidant	Tertile 3	Tertile 2	Tertile 1

Total fat (gm)	Pro-oxidant	Tertile 3	Tertile 2	Tertile 1
Lifestyle OBS components				
Cotinine (ng/ml)	Pro-oxidant	Tertile 3	Tertile 2	Tertile 1
Alcohol (g/day)	Pro-oxidant	>30.0	0.1-30.0	0.0
Body mass index (kg/m ²)	Pro-oxidant	≥30.0	25.0-29.9	<25.0
Physical activity (MET-minute/week)	Anti-oxidant	<600	600-3000	>3000

Table S3 Demographic characteristics stratified by the presence or absence of frailty

(n = 22,914).

	Overall (n=22914)	Frailty (n=4934)	Fit (n=17980)	<i>P</i>
Energy intake (kcal)	2115.14(9.24)	1894.72(16.90)	2158.32(10.16)	<0.001
OBS	20.19(0.12)	17.95(0.16)	20.63(0.12)	0.001
Dietary OBS	15.67(0.10)	13.93(0.14)	16.01(0.11)	<0.001
Lifestyle OBS	4.52(0.02)	4.02(0.04)	4.62(0.03)	<0.001
Sex				<0.001
Male	11428(49.53)	2271(42.28)	9157(50.95)	
Female	11486(50.47)	2663(57.72)	8823(49.05)	
Age				<0.001
20-39	7729(37.87)	249(6.77)	7480(43.96)	
40-64	9976(44.96)	2002(44.12)	7974(45.12)	
≥65	5209(17.18)	2683(49.10)	2526(10.92)	
Race				<0.001
Non-Hispanic White	10118(67.70)	2496(72.14)	7622(66.83)	
Other	12796(32.30)	2438(27.86)	10358(33.17)	
Education level				<0.001
Below high school	5209(14.47)	1621(22.68)	3588(12.86)	
High school	5215(22.70)	1257(28.23)	3958(21.62)	

Above high school	12490(62.83)	2056(49.09)	10434(65.52)	
Marital status				<0.001
Married/living with partner	9099(63.05)	2332(43.27)	6767(35.72)	
Other	13815(36.95)	2602(56.73)	11213(64.28)	
Poverty-income ratio				<0.001
≤1.30	7162(21.97)	2030(32.09)	5132(19.99)	
1.31-3.50	8646(34.82)	1966(40.56)	6680(33.70)	
>3.50	7106(43.21)	938(27.35)	6168(46.31)	

Continuous variables were expressed with means (standard error) and categorical variables were described with frequencies (percentages). Continuous variables were compared using T test and categorical variables were using chi-square tests. $P<0.05$ was set as the threshold of statistical significance and marked in bold values.