

SUPPLEMENTAL MATERIAL

Table S1. Components and definition of the Cardiovascular Health score.

Goal/Metric	Poor Health	Intermediate Health	Ideal Health
Smoking	Current smoker	Quit \leq 12 months	Never or quit \geq 12 months
Body mass index	≥ 30 kg/m ²	25–<30 kg/m ²	<25 kg/m ²
Physical activity score*	< Median value	Median value – top quartile	Top quartile
Healthy diet score†	0 components	1 component	\geq 2 components
Total cholesterol	≥ 240 mg/dL	200–<240 mg/dL or treated to goal	<200 mg/dL
Blood pressure	SBP \geq 140 mmHg or DBP \geq 90 mmHg	SBP 120–<140 mmHg or DBP 80–<90 mmHg or treated to goal	SBP<120 mmHg and DBP<80 mmHg and not on hypertension treatment
Fasting plasma glucose	≥ 126 mg/dL	100–<126 mg/dL or treated to goal	<100 mg/dL and not on diabetes treatment

SBP, systolic blood pressure; DBP, diastolic blood pressure

*Physical activity score was calculated using the formula:

1*sleep hrs/day + 1.1*sedentary hrs/day + 1.5*slight activity hrs/day + 2.4*moderate activity hrs/day + 5*heavy activity hrs/day

This definition is quantitatively similar to the AHA physical activity metric.

† Dietary components of the AHA healthy diet score:

≥ 4.5 cups/day of fruits and vegetables

\geq two 3.5 oz servings/week of fish (preferably oily fish)

<1500 mg/day of sodium

≤ 450 kcal/week of sugar-sweetened beverages

\geq three 1-oz equivalent servings/day of fiber-rich whole grains

Table S2. Components and definition of subclinical disease.

Characteristic	Definition of subclinical disease component	Cut-points for subclinical disease presence used in the present study
1. Left ventricular (LV) hypertrophy by ECG/echocardiography		
LV hypertrophy by ECG	Sum of R in AVL plus S in V3	Exceeding 2.8 mV in men and 2.0 mV in women
LV hypertrophy by echocardiography	LV mass was calculated as $0.8 \{1.04 [(IVS+LVEDD+PW)^3 - (LVEDD)^3]\} + 0.6$ g. LV mass values were then adjusted for height using the ratio of LV mass to height.	LVM/height (in meters) ≥ 127 in men, and LVM/height (in meters) ≥ 100 in women
2. LV systolic dysfunction by echocardiography		
LV systolic dysfunction	LV fractional shortening was calculated as $(LVEDD-LVESD)/LVEDD$.	A fractional shortening of less than 0.29 by M-mode, or by evidence on two-dimensional echocardiography of mild or greater systolic dysfunction on visual assessment in multiple views (corresponding to ejection fraction less than 50%), or by both criteria.
3. Carotid ultrasound abnormality*		
Increased carotid artery IMT	A composite measure that combined the maximal common carotid artery IMT and maximal internal carotid artery IMT was obtained by averaging these two measurements after standardization (subtraction of the mean and division by the standard deviation for the measurement).	1) A standardized carotid IMT that met or exceeded the sex-specific 80th percentiles in the sample; 2) An extreme increase of common carotid IMT; or 3) Presence of carotid artery stenosis $\geq 25\%$.
Extreme increase of common carotid artery IMT	An extreme increase of common carotid IMT ≥ 1 mm.	
Carotid artery stenosis $\geq 25\%$	Presence of a stenosis of $\geq 25\%$ in the internal or common carotid artery.	
4. Peripheral arterial disease		
Ankle-brachial index ≤ 0.9	Defined as the ratio of the average systolic blood pressure at the ankle of each leg divided by the average systolic blood pressure in the arm with the highest blood pressure.	An ankle-brachial index at or below 0.9 in either leg.
5. Glomerular endothelial dysfunction		
Microalbuminuria	Urine albumin to urine creatinine ratio	≥ 25 $\mu\text{g}/\text{mg}$ in men, and ≥ 35 $\mu\text{g}/\text{mg}$ in women

IMT: intima-media thickness; LVEDD: left ventricular end diastolic diameter; LVESD: left ventricular end systolic diameter; LVM: left ventricular mass; PW: posterior wall; IVS: inter-ventricular septum.

*In Exam 5, carotid ultrasound abnormality was defined using only carotid artery stenosis $\geq 25\%$. In Exam 8, carotid ultrasound abnormality was defined using only increased carotid artery IMT or extreme increase of common carotid artery IMT.

Table S3. Frequencies of CVH score groups by sex in sample with ≥ 2 exams available (n=2,805).

CVH score category, n (%)	Women N=1549	Men N=1256
High – high	840 (54.2)	532 (42.4)
High – low	276 (17.8)	275 (21.9)
Low – high	119 (7.7)	135 (10.7)
Low – low	314 (20.3)	314 (25.0)

High – high: starting CVH score ≥ 8 and last CVH score of ≥ 8

High – low: starting CVH score ≥ 8 and last CVH score of ≤ 7

Low – high: starting CVH score ≤ 7 and last CVH score of ≥ 8

Low – low: starting CVH score ≤ 7 and last CVH score of ≤ 7

CVH: cardiovascular health

Table S4. Distribution of exams for participants with ≥ 2 exams available.

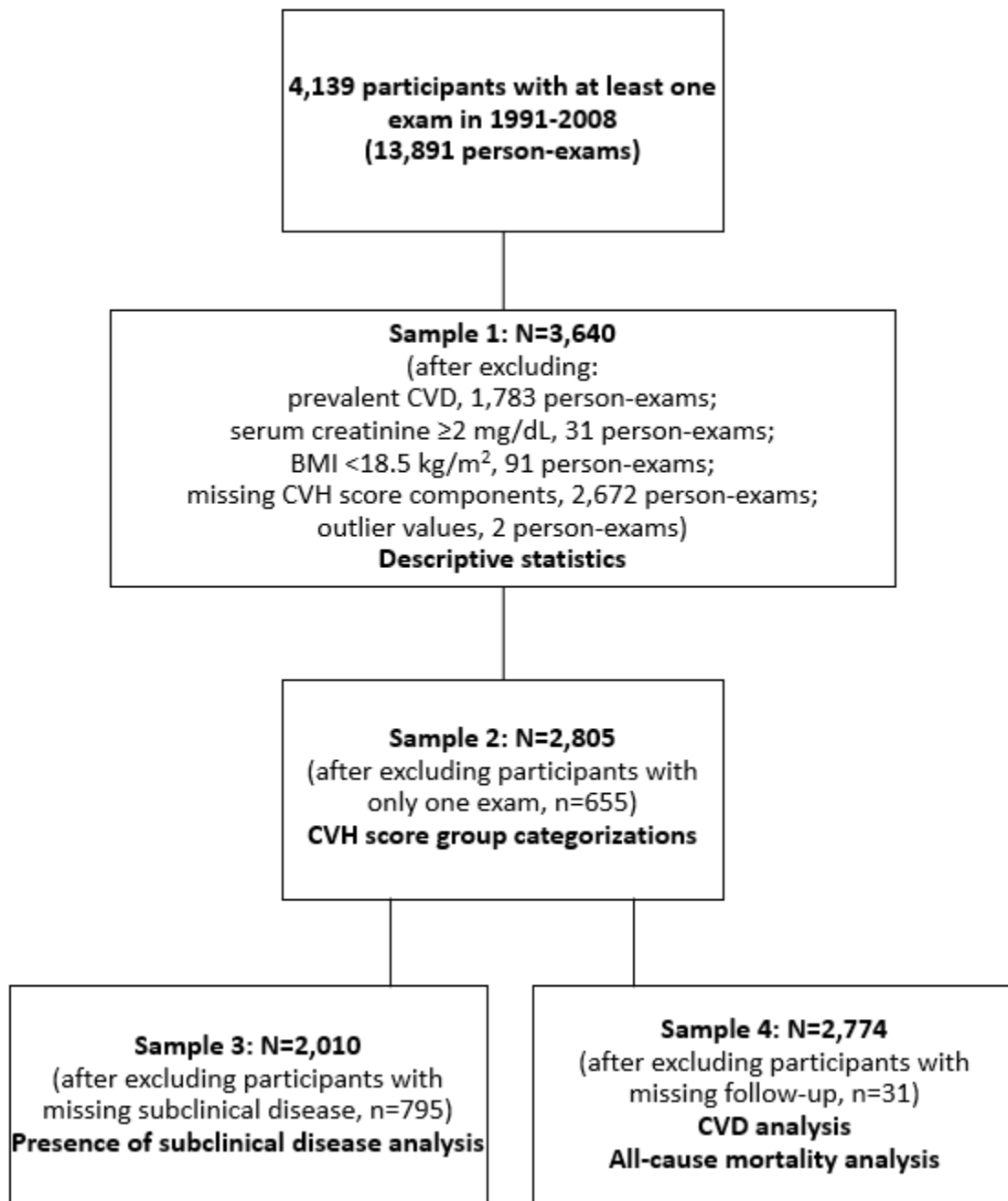
Available exams	N (%)
Exam 5, Exam 6, Exam 7, Exam 8	997 (35.5)
Exam 5, Exam 6, Exam 7	336 (12.0)
Exam 5, Exam 6, Exam 8	177 (6.3)
Exam 5, Exam 7, Exam 8	400 (14.2)
Exam 6, Exam 7, Exam 8	140 (5.0)
Exam 5, Exam 6	214 (7.6)
Exam 5, Exam 7	187 (6.7)
Exam 5, Exam 8	114 (4.1)
Exam 6, Exam 7	86 (3.1)
Exam 6, Exam 8	39 (1.4)
Exam 7, Exam 8	115 (4.1)

Abbreviations: Exam= FHS examination cycle; N=count

Table S5. Breakdown of incident cardiovascular disease (CVD) events.

CVD event type	N (%)
Myocardial infarction recognized, with diagnostic electrocardiogram	37 (8.6)
Myocardial infarction recognized, without electrocardiogram, with enzymes and history	48 (11.2)
Myocardial infarction unrecognized, silent	7 (1.6)
Myocardial infarction unrecognized, not silent	2 (0.5)
Angina pectoris, first episode only	80 (18.7)
Coronary insufficiency, definite by both history and ECG	8 (1.9)
Atherothrombotic infarction of brain	43 (10.1)
Transient ischemic stroke	46 (10.8)
Cerebral embolism	13 (3.0)
Intracerebral hemorrhage	9 (2.1)
Subarachnoid hemorrhage	3 (0.7)
Other cerebrovascular accident	1 (0.2)
Death, coronary heart disease sudden, within 1 hour	11 (2.6)
Death, coronary heart disease, 1-23 hours, non-sudden	2 (0.5)
Death, coronary heart disease, 24-47 hours, non-sudden	1 (0.2)
Death, coronary heart disease, 48 hours+, non-sudden	2 (0.5)
Death, cerebrovascular accident	1 (0.2)
Death, other cardiovascular disease	4 (0.9)
Intermittent claudication, first episode only	33 (7.7)
Congestive heart failure, not hospitalized	9 (2.1)
Congestive heart failure, hospitalized	68 (15.9)

Figure S1. Sample exclusions.



CVH: cardiovascular health; CVD: cardiovascular disease; BMI: body mass index