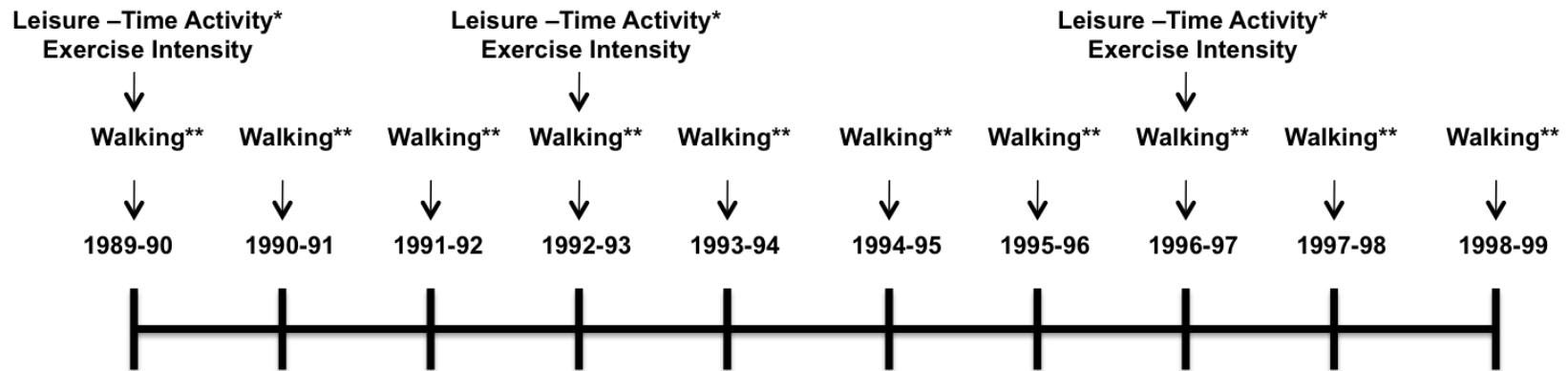


SUPPLEMENTAL MATERIAL

Supplementary Figure 1. Timeline assessment of physical activity in the Cardiovascular Health Study from 1989/90 to 1998/99.



**Both distance and pace walking were assessed.

The 5,888 study participants were recruited from four U.S. communities and have undergone extensive clinic examinations for evaluation of markers of subclinical cardiovascular disease. The original cohort totaled 5,201 participants. A new cohort was recruited in 1992. The 687 participants in the new cohort are predominately African-American and were recruited at three of the four field centers.

Walking score is an ordinal score based on the combination of walking distance and walking pace. Exercise intensity was based on self-reported intensity of exercise, separately evaluated from kcal/week of leisure-time activity and walking.

Supplementary Table 1. Incidence of ischemic and hemorrhagic stroke according to different types of physical activity among 4,207 older US adults*.

Hazard ratios (95% confidence intervals) for Stroke				
	Ischemic Stroke		Hemorrhagic stroke	
<i>N</i> ^o of incidence/total		<i>p</i>		<i>p</i>
Walking pace, mph				
< 2	Reference		Reference	
2-3	0.63(0.51,0.77)	<0.001	1.29(0.76, 2.21)	0.348
> 3	0.47(0.33,0.68)	<0.001	0.40(0.13, 1.22)	0.106
<i>P trend</i>	<0.001		0.392	
Walking distance, blocks/week				
0-5	Reference		Reference	
6-12	0.58(0.44,0.77)	<0.001	0.85(0.40,1.78)	0.660
13-25	0.52(0.39,0.68)	<0.001	0.74(0.34,1.58)	0.435
26-48	0.44(0.32,0.60)	<0.001	0.93(0.43,1.99)	0.846
≥49	0.45(0.33,0.61)	<0.001	0.68(0.30,1.56)	0.363
<i>P trend</i>	<0.001		0.489	
Walking Score †				
I	Reference		Reference	
II	0.57(0.44,0.73)	<0.001	0.91(0.45,1.84)	0.791
III	0.42(0.32,0.56)	<0.001	0.81(0.39,1.68)	0.570
IV	0.39(0.28,0.54)	<0.001	0.63(0.27,1.50)	0.295
<i>P trend</i>	<0.001		0.272	
Leisure-time activity, kcal/week †				
I	Reference		Reference	
II	0.84(0.64,1.11)	0.228	0.55(0.26,1.17)	0.119
III	0.61(0.45,0.82)	0.001	0.79(0.40,1.57)	0.505
IV	0.72(0.54,0.97)	0.032	0.63(0.30,1.32)	0.223
V	0.58(0.42,0.80)	0.001	0.52(0.23,1.17)	0.114
<i>P trend</i>	0.001		0.216	
Exercise Intensity †				
None	Reference		Reference	
Low	0.74(0.52,1.05)	0.095	0.59(0.24,1.41)	0.236
Moderate	0.62(0.43, 0.90)	0.012	0.51(0.20,1.27)	0.149
High	0.39(0.22,0.69)	0.001	0.65(0.20,2.10)	0.474
<i>P trend</i>	0.001		0.445	

* For each analysis participants with prevalent disease at baseline were excluded. All analyses are adjusted for age (years), gender (male/female), race (white/nonwhite), education (< high school, high school, > high school), income (≤/ > \$ 25,000/yr), clinical sites (four categories), smoking (never, former, current), body mass index (kg/m²). All physical activity variables were updated over time.

† See text and Supplementary Figure 1 for details on how the physical activity variables were define.

Supplementary Table 2. Incidence of ischemic stroke according to different types of physical activity among older US adults, stratified by age and gender *.

Hazard ratios (95% confidence intervals) for Ischemic Stroke									
<i>N</i> ^o of incidence/total	272/2926		192/1281		180/1633		284/2574		
	<75 years (69.4±2.6)	<i>p</i>	≥75 years (79.3±3.9)	<i>p</i>	Men	<i>p</i>	Women	<i>p</i>	
Walking pace, mph									
< 2	Reference		Reference		Reference		Reference		
2-3	0.68(0.52,0.90)	0.006	0.58(0.42,0.79)	0.001	0.62(0.45,0.87)	0.005	0.65(0.50,0.84)	0.001	
> 3	0.50(0.33,0.77)	0.002	0.37(0.17,0.82)	0.014	0.48(0.28,0.82)	0.008	0.46(0.28,0.75)	0.002	
<i>P trend</i>	0.001		<0.001		0.002		<0.001		
Walking distance, blocks/week									
0-5	Reference		Reference		Reference		Reference		
6-12	0.60(0.40,0.91)	0.015	0.60(0.40,0.89)	0.010	0.38(0.22,0.64)	<0.001	0.67(0.48,0.94)	0.019	
13-25	0.52(0.35,0.78)	0.001	0.53(0.35,0.81)	0.003	0.39(0.24,0.62)	<0.001	0.57(0.40,0.81)	0.002	
26-48	0.48(0.32,0.72)	<0.001	0.41(0.24,0.68)	0.001	0.31(0.19,0.51)	<0.001	0.51(0.34,0.77)	0.001	
≥49	0.52(0.35,0.79)	0.002	0.32(0.17,0.58)	<0.001	0.28(0.17,0.45)	<0.001	0.62(0.41,0.94)	0.025	
<i>P trend</i>	0.005		<0.001		<0.001		0.003		
Walking Score †									
I	Reference		Reference		Reference		Reference		
II	0.62(0.43,0.91)	0.013	0.56(0.39,0.80)	0.001	0.43(0.27,0.68)	<0.001	0.64(0.47,0.86)	0.004	
III	0.43(0.29,0.63)	<0.001	0.45(0.30,0.68)	<0.001	0.33(0.21,0.52)	<0.001	0.46(0.33,0.66)	<0.001	
IV	0.47(0.31,0.71)	<0.001	0.20(0.10,0.42)	<0.001	0.25(0.15,0.42)	<0.001	0.52(0.34,0.79)	0.002	
<i>P trend</i>	<0.001		<0.001		<0.001		<0.001		
Leisure-time activity, kcal/week †									
I	Reference		Reference		Reference		Reference		
II	1.10(0.74,1.64)	0.637	0.66(0.44,0.99)	0.044	0.70(0.40,1.25)	0.228	0.89(0.65,1.23)	0.479	
III	0.68(0.44,1.06)	0.089	0.60(0.40,0.90)	0.015	0.59(0.34,1.02)	0.058	0.60(0.42,0.87)	0.006	
IV	1.04(0.69,1.56)	0.856	0.46(0.28,0.74)	0.001	0.63(0.37,1.07)	0.087	0.77(0.54,1.11)	0.162	
V	0.76(0.49,1.18)	0.229	0.42(0.25,0.72)	0.001	0.53(0.32,0.90)	0.018	0.57(0.36,0.91)	0.019	
<i>P trend</i>	0.219		<0.001		0.037		0.008		
Exercise Intensity †									
None	Reference		Reference		Reference		Reference		
Low	0.61(0.40,1.00)	0.050	0.90(0.55,1.48)	0.671	0.87(0.43,1.75)	0.694	0.71(0.47,1.07)	0.103	
Moderate	0.56(0.34,0.93)	0.026	0.65(0.38,1.11)	0.116	0.83(0.41,1.67)	0.604	0.55(0.35,0.85)	0.007	
High	0.39(0.20,0.77)	0.006	0.20(0.05,0.88)	0.033	0.53(0.21,1.33)	0.179	0.34(0.16,0.72)	0.005	
<i>P trend</i>	0.018		0.005		0.210		0.001		

* For each analysis participants with prevalent disease at baseline were excluded. All analyses are adjusted for age (years), gender (male/female), race (white/nonwhite), education (< high school, high school, > high school), income (≤/ > \$ 25,000/yr), clinical sites (four categories), smoking (never, former, current), body mass index (kg/m²). All physical activity variables were updated over time.

† See text and Supplementary Figure 1 for details on how the physical activity variables were define.

Supplementary Table 3. Incidence of CHD, stroke and CVD according to different types of physical activity among older US adults, adjusting for blood pressure, blood lipid levels, and C-reactive protein.*

	Hazard ratios (95% confidence intervals)					
	Total CHD		Total Stroke		Total CVD	
<i>N</i> ^o of incidence/total	680/3815		513/3815		1069/3815	
		<i>p</i>		<i>p</i>		<i>p</i>
Walking-pace, mph						
< 2	Reference		Reference		Reference	
2-3	0.69(0.59,0.82)	<0.001	0.69(0.57,0.84)	<0.001	0.69(0.60,0.79)	<0.001
> 3	0.55(0.41,0.74)	<0.001	0.47(0.33,0.67)	<0.001	0.52(0.41,0.65)	<0.001
<i>P</i> -trend	<0.001		<0.001		<0.001	
Walking-distance, blocks/week						
0-5	Reference		Reference		Reference	
6-12	0.87(0.68,1.11)	0.253	0.57(0.44,0.75)	<0.001	0.71(0.58,0.85)	<0.001
13-25	0.90(0.71,1.15)	0.416	0.53(0.40,0.69)	<0.001	0.71(0.59,0.86)	<0.001
26-48	0.64(0.49,0.84)	0.001	0.53(0.40,0.70)	<0.001	0.58(0.47,0.71)	<0.001
≥49	0.71(0.54,0.93)	0.013	0.49(0.36,0.66)	<0.001	0.57(0.46,0.70)	<0.001
<i>P</i> -trend	0.002		<0.001		<0.001	
Walking-Score †						
I	Reference		Reference		Reference	
II	0.99(0.79,1.26)	0.984	0.57(0.45,0.73)	<0.001	0.77(0.64,0.92)	0.004
III	0.72(0.56,0.92)	0.010	0.47(0.36,0.61)	<0.001	0.57(0.47,0.69)	<0.001
IV	0.65(0.49,0.87)	0.003	0.43(0.31,0.58)	<0.001	0.50(0.40,0.62)	<0.001
<i>P</i> -trend	<0.001		<0.001		<0.001	
Leisure-time activity, kcal/week †						
I	Reference		Reference		Reference	
II	0.60(0.47,0.77)	<0.001	0.77(0.59,1.00)	0.048	0.68(0.56,0.82)	<0.001
III	0.66(0.52,0.84)	0.001	0.58(0.44,0.77)	<0.001	0.64(0.53,0.77)	<0.001
IV	0.69(0.54,0.88)	0.002	0.71(0.54,0.93)	0.013	0.71(0.58,0.86)	<0.001
V	0.56(0.43,0.73)	<0.001	0.53(0.39, 0.72)	<0.001	0.56(0.47,0.70)	<0.001
<i>P</i> -trend	0.001		<0.001		<0.001	
Exercise Intensity †						
None	Reference		Reference		Reference	
Low	0.56(0.43,0.74)	<0.001	0.68(0.48,0.96)	0.028	0.63(0.49,0.79)	<0.001
Moderate	0.53(0.40,0.70)	<0.001	0.55(0.38,0.78)	0.001	0.55(0.43,0.70)	<0.001
High	0.45(0.30,0.68)	<0.001	0.41(0.25,0.69)	0.001	0.44(0.31,0.62)	<0.001
<i>P</i> -trend	0.001		<0.001		<0.001	

CVD cardiovascular disease; CHD, coronary heart disease. *Sample size included fewer participants in each analysis due to missing data on blood pressure, blood lipid levels, and C-reactive protein. For each analysis participants with prevalent disease at baseline were excluded. All analyses are adjusted for age (years), gender (male/female), race (white/nonwhite), education (< high school, high school, > high school), income (≤/ > \$ 25,000/yr), clinical sites (four categories), smoking (never, former, current), body mass index (kg/m²). All physical activity variables were updated over time.

† See text and Supplementary Figure 1 for details on how the physical activity variables were defined.

Supplementary Table 4. Incidence of CHD, stroke and CVD according to different types of physical activity among older US adults, excluding participants with poor or fair self-reported health status at baseline*.

	Hazard ratios (95% confidence intervals)					
	Total CHD		Total Stroke		Total CVD	
<i>N</i> ^o of incidence/total	578/3376	<i>p</i>	435/3376	<i>p</i>	911/3376	<i>p</i>
Walking-pace, mph						
< 2	Reference		Reference		Reference	
2-3	0.63(0.53,0.76)	<0.001	0.68(0.55,0.84)	<0.001	0.64(0.56,0.75)	<0.001
> 3	0.47(0.35,0.64)	<0.001	0.46(0.32,0.66)	<0.001	0.47(0.37,0.60)	<0.001
<i>P</i> -trend	<0.001		<0.001		<0.001	
Walking-distance, blocks/week						
0-5	Reference		Reference		Reference	
6-12	0.82(0.62,1.08)	0.163	0.57(0.42,0.78)	<0.001	0.69(0.55,0.85)	0.001
13-25	0.83(0.63,1.09)	0.172	0.57(0.42,0.77)	<0.001	0.68(0.55,0.84)	<0.001
26-48	0.61(0.45,0.82)	0.001	0.50(0.36,0.69)	<0.001	0.55(0.44,0.70)	<0.001
≥49	0.64(0.47,0.86)	0.003	0.48(0.34,0.66)	<0.001	0.53(0.42,0.67)	<0.001
<i>P</i> -trend	0.001		<0.001		<0.001	
Walking-Score †						
I	Reference		Reference		Reference	
II	0.92(0.71,1.21)	0.560	0.61(0.46,0.81)	0.001	0.76(0.62,0.93)	0.008
III	0.67(0.51,0.88)	0.005	0.48(0.36,0.65)	<0.001	0.56(0.45,0.69)	<0.001
IV	0.55(0.40,0.75)	<0.001	0.42(0.30,0.59)	<0.001	0.45(0.35,0.58)	<0.001
<i>P</i> -trend	<0.001		<0.001		<0.001	
Leisure-time activity, kcal/week †						
I	Reference		Reference		Reference	
II	0.65(0.49,0.87)	0.002	0.87(0.64,1.17)	0.353	0.73(0.59,0.91)	0.004
III	0.67(0.51,0.87)	0.003	0.64(0.47,0.88)	0.005	0.66(0.54,0.82)	<0.001
IV	0.66(0.50,0.86)	0.003	0.72(0.53,0.99)	0.041	0.70(0.56,0.86)	0.001
V	0.53(0.40,0.70)	<0.001	0.57(0.41, 0.80)	0.001	0.56(0.45,0.71)	<0.001
<i>P</i> -trend	<0.001		0.001		<0.001	
Exercise Intensity †						
None	Reference		Reference		Reference	
Low	0.64(0.46,0.89)	0.007	0.69(0.46,1.02)	0.062	0.68(0.52,0.89)	0.005
Moderate	0.62(0.45,0.87)	0.005	0.62(0.42, 0.93)	0.021	0.63(0.48,0.83)	0.001
High	0.56(0.36,0.87)	0.009	0.44(0.25,0.76)	0.003	0.52(0.36,0.75)	<0.001
<i>P</i> -trend	0.048		0.006		0.002	

CVD cardiovascular disease; CHD, coronary heart disease. * Sample size included 454 fewer participants in each analysis due to missing data on self-reported health status. For each analysis participants with prevalent disease at baseline were excluded. All analyses are adjusted for age (years), gender (male/female), race (white/nonwhite), education (< high school, high school, > high school), income (≤/ > \$ 25,000/yr), clinical sites (four categories), smoking (never, former, current), body mass index (kg/m²). All physical activity variables were updated over time.

† See text and Supplementary Figure 1 for details on how the physical activity variables were defined.

Supplementary Table 5. Incidence of cardiovascular disease according to different types of physical activity among older US adults, stratified by health status*.

Hazard ratios (95% confidence intervals) for Cardiovascular Heart Disease					
<i>N</i> ^o of incidence/total	149/643	256/1051	436/1369	194/578	29/69
	Excellent	Very good	Good	Fair	Poor
Walking pace, mph					
< 2	Reference	Reference	Reference	Reference	Reference
2-3	0.73(0.48,1.12)	0.75(0.56,1.00)	0.59(0.48,0.72)	0.98(0.72,1.33)	1.03(0.29,3.64)
> 3	0.57(0.33,0.97)	0.61(0.39,0.95)	0.41(0.27,0.63)	1.34(0.69,2.63)	1.58 x10 ⁻¹⁵ (0,.)
<i>P</i> trend	0.04	0.02	<0.001	0.727	0.986
Walking distance, blocks/week					
0-5	Reference	Reference	Reference	Reference	Reference
6-12	0.62(0.29,1.29)	0.78(0.50,1.22)	0.60(0.45,0.82)	0.86(0.57,1.30)	0.42(0.06,2.81)
13-25	0.84(0.45,1.57)	0.81(0.52,1.25)	0.65(0.48,0.87)	0.73(0.47,1.11)	9.13(1.92,43.37)
26-48	0.85(0.45,1.60)	0.68(0.43,1.09)	0.46(0.33,0.64)	0.75(0.46,1.22)	3.01(0.20,46.5)
≥49	0.55(0.29,1.05)	0.61(0.38,0.99)	0.53(0.39,0.74)	0.79(0.47,1.34)	27.4(2.37,318.1)
<i>P</i> trend	0.135	0.045	<0.001	0.220	0.013
Walking Score †					
I	Reference	Reference	Reference	Reference	Reference
II	1.12(0.54,2.32)	0.83(0.54,1.28)	0.69(0.53,0.92)	0.86(0.59,1.25)	0.88(0.23,3.33)
III	0.95(0.47,1.92)	0.68(0.44,1.07)	0.47(0.35,0.64)	0.65(0.42,1.02)	4.09(0.80,20.8)
IV	0.60(0.28,1.28)	0.58(0.35,0.96)	0.45(0.32,0.63)	0.98(0.57,1.67)	5.21(0.37,72.9)
<i>P</i> trend	0.023	0.017	<0.001	0.362	0.115
Leisure-time activity, kcal/week †					
I	Reference	Reference	Reference	Reference	Reference
II	1.33(0.70,2.51)	0.40(0.26,0.61)	0.84(0.62,1.14)	0.81(0.53,1.25)	0.44(0.09,2.10)
III	0.84(0.44,1.63)	0.62(0.43,0.91)	0.69(0.51,0.94)	0.74(0.47,1.16)	0.66(0.11,3.97)
IV	1.04(0.56,1.92)	0.46(0.31,0.69)	0.80(0.58,1.10)	1.03(0.65,1.63)	1.58(0.34,7.36)
V	0.73(0.38,1.39)	0.39(0.25,0.61)	0.67(0.48,0.93)	0.86(0.51,1.43)	5.37(1.26,22.85)
<i>P</i> trend	0.121	<0.001	0.026	0.904	0.084
Exercise Intensity †					
None	Reference	Reference	Reference	Reference	Reference
Low	1.44(0.45,4.65)	0.43(0.26,0.72)	0.68(0.47,0.97)	0.69(0.43,1.11)	0.57(0.43,1.11)
Moderate	1.54(0.48,4.93)	0.40(0.24,0.67)	0.65(0.44,0.94)	0.55(0.33,0.91)	1.92(0.33,0.91)
High	1.15(0.33,4.00)	0.25(0.12,0.54)	0.66(0.40,1.08)	0.94(0.35,2.54)	3.46 x10 ⁻¹⁶ (0,.)
<i>P</i> trend	0.879	0.005	0.136	0.069	0.473

* For each analysis participants with prevalent disease at baseline were excluded. All analyses are adjusted for age (years), gender (male/female), race (white/nonwhite), education (< high school, high school, > high school), income (≤/ > \$ 25,000/yr), clinical sites (four categories), smoking (never, former, current), body mass index (kg/m²). All physical activity variables were updated over time.

† See text and Supplementary Figure 1 for details on how the physical activity variables were define.

Supplementary Table 6. Incidence of CHD, stroke and CVD according to mutual adjusted analyses to different types of physical activity PA among 4,207 older US adults *.

	Hazard ratios (95% confidence intervals)					
	Total CHD		Total Stroke		Total CVD	
<i>N° of incidence/total</i>	762/4207	<i>p</i>	464/4207	<i>p</i>	1182/4207	<i>p</i>
Walking Score †	0.83(0.76,0.91)	<0.001	0.74(0.72,0.87)	<0.001	0.79(0.73,0.85)	<0.001
Leisure-time activity, kcal/week	0.98(0.92,1.06)	0.660	1.00 (0.92,1.09)	0.996	1.00(0.94,1.06)	0.939
Exercise intensity ‡	0.89(0.79,1.00)	0.059	0.86(0.73,1.00)	0.054	0.88(0.80,0.97)	0.008

Mutually-adjusted analyses for walking score, leisure-time activity and exercise intensity. CVD cardiovascular disease; CHD, coronary heart disease. * For each analysis participants with prevalent disease at baseline were excluded. All analyses are adjusted for age (years), gender (male/female), race (white/nonwhite), education (< high school, high school, > high school), income (\leq / $>$ \$ 25,000/yr), clinical sites (four categories), smoking (never, former, current), body mass index (kg/m^2). All physical activity variables were updated over time.

† See text and Supplementary Figure 1 for details on how the physical activity variables were defined.