Supplemental Material

Figure S1. Physical Activity Questionnaire, Women's Health Study

Physical Activity Questionnaire

What is your usual walking pace outdoors?

☐ Don't walk regularly ☐ Easy, casual (<2 mph) ☐ Normal, average (2 to 2.9 mph) ☐ Brisk pace (3 to 3.9 mph) ☐ Very brisk, striding (4 mph or faster)

On average, how many **flights** of stairs (not individual steps) do you climb **daily**?

☐ None ☐ 1-2 flights ☐ 3-4 flights ☐ 5-9 flights ☐ 10-14 flights ☐ 15 or more flights

During the past month, what was your approximate **time per week** spent at each of the following recreational activities?

	TIME PER WEEK							
	Zero	1-19 min.	20-59 min.	One hour	1.5 hours	2-3 hours	4-6 hours	7+ hours
Walking or hiking (including walking to work)	☐	☐	☐	☐	☐	☐	☐	☐
Jogging (slower than 10 minute miles)	☐	☐	☐	☐	☐	☐	☐	☐
Running (10 minute miles or faster)	☐	☐	☐	☐	☐	☐	☐	☐
Bicycling (include stationary bike)	☐	☐	☐	☐	☐	☐	☐	☐
Aerobic exercise / aerobic dance / exercise machines	☐	☐	☐	☐	☐	☐	☐	☐
Lower intensity exercise / yoga / stretching / toning	☐	☐	☐	☐	☐	☐	☐	☐
Tennis, squash, racquetball	☐	☐	☐	☐	☐	☐	☐	☐
Lap swimming	☐	☐	☐	☐	☐	☐	☐	☐
Weight lifting / strength training	☐	☐	☐	☐	☐	☐	☐	☐
Other: Please specify activity:	☐	☐	☐	☐	☐	☐	☐	☐

Figure S2. Unadjusted Cumulative Incidence of Deaths from All-Cause (A), Cardiovascular Diseases (B), and Cancer (C) by Baseline Weekly Time of Strength Training, Women's Health Study (2001-2015).

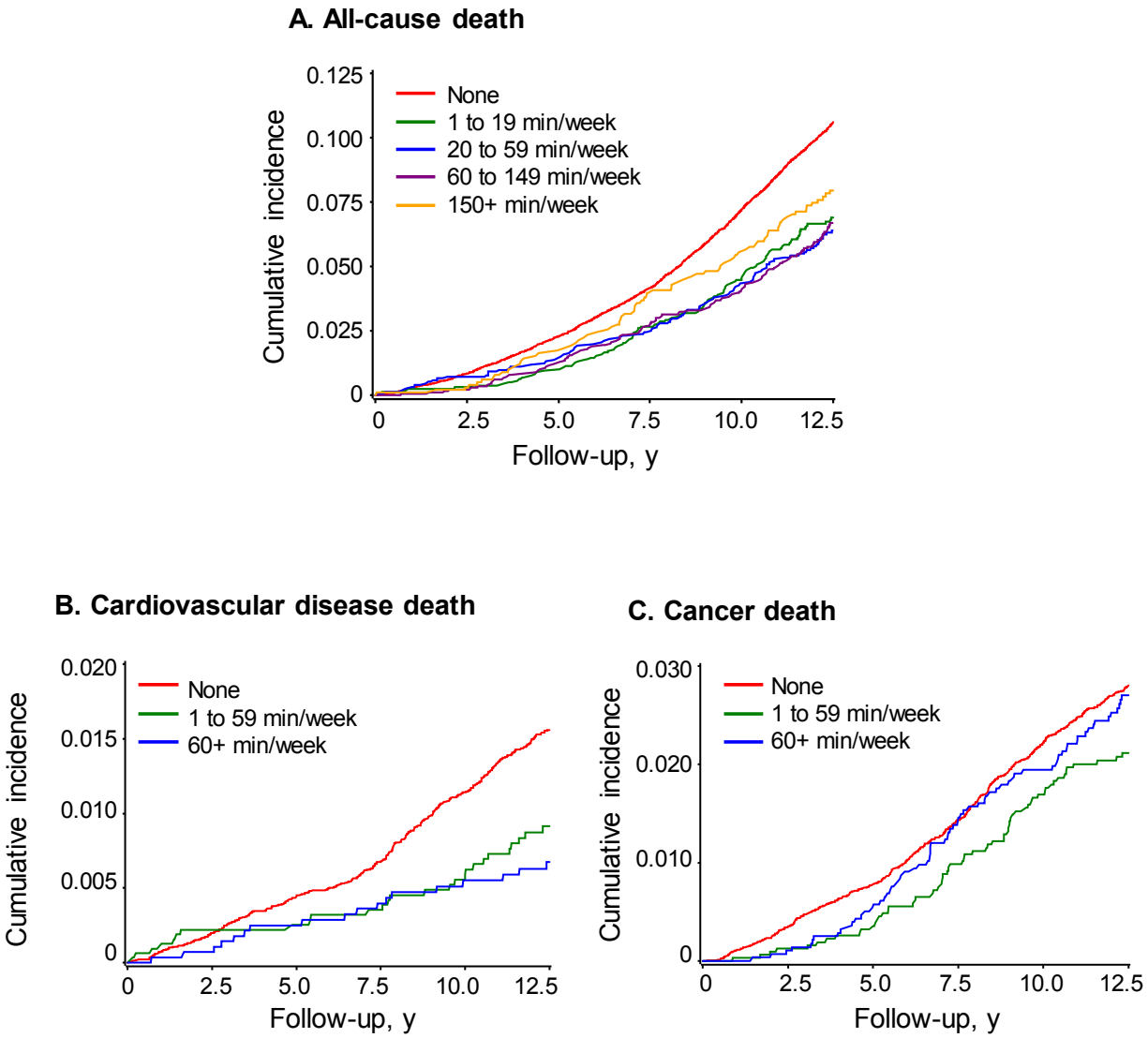

Table S1. Relative Risks of All-Cause Mortality with Strength Training by Subgroup, Women's Health Study (2001-2015)

Subgroup	Cases (PY)	Minutes per Week in Strength Training			*P* for Linear	*P* for Quadratic	*P* for Interaction*
		None	1 to 59 min	≥60 min			
Age, y							
<60	571 (164 997)	Reference	0.72 (0.59, 0.89)	0.83 (0.58, 1.18)	0.58	0.113	0.056
≥60	2484 (181 847)	Reference	0.69 (0.62, 0.76)	0.84 (0.70, 1.02)	0.198	<0.001	
BMI, kg/m^2							
<25.0	1442 (150 910)	Reference	0.71 (0.62, 0.81)	0.83 (0.66, 1.05)	0.41	<0.001	
25 to <30	963 (118 964)	Reference	0.62 (0.53, 0.74)	0.92 (0.69, 1.23)	0.68	0.034	0.44
≥30	649 (76 900)	Reference	0.79 (0.64, 0.98)	0.74 (0.46, 1.17)	0.31	0.98	

Abbreviations: PY, person-years; BMI, body mass index. All values are hazard ratios (95% confidence intervals) based on cumulative average models unless otherwise stated. Cases (PY) are shown based on the categories of baseline physical activities.

Hazard ratios are adjusted for age, race, education, postmenopausal status, hormone use, smoking status, parental history of myocardial infarction or cancer, alcohol intake, energy intake, saturated fat, fiber intake, fruits and vegetables, physical exam for screening, time per week spent in aerobic moderate to vigorous physical activity, body mass index, incidence of hypertension, high cholesterol, cardiovascular diseases, diabetes, and cancer during follow-up, and trial randomization.

*Interaction test for quadratic associations by using model fit statistics (-2 log likelihood) with and without interaction terms and chi-square test.

Table S2. Relative Risks of All-Cause Mortality with Strength Training (Simple-Updated and Baseline-Value Models), Women's Health Study (2001-2015)

	Minutes per Week in Strength Training					P for Linear	P for Quadratic
	None	1 to 19 min	20 to 59 min	60 to 149 min	≥150 min		
Cases (person-years)	2599 (271 749)	130 (20 224)	107 (19 319)	133 (23 035)	86 (12 515)		
Simple-updated model*							
Multivariable model 1†	Reference	0.64 (0.53, 0.77)	0.53 (0.43, 0.66)	0.54 (0.44, 0.65)	0.58 (0.44, 0.76)	<0.001	<0.001
Multivariable model 2‡	Reference	0.79 (0.65, 0.96)	0.73 (0.59, 0.91)	0.81 (0.66, 0.99)	0.88 (0.67, 1.16)	0.30	<0.001
Multivariable model 3§	Reference	0.80 (0.65, 0.97)	0.68 (0.55, 0.85)	0.78 (0.64, 0.96)	0.84 (0.64, 1.11)	0.14	<0.001
Baseline-value model‖							
Multivariable model 1†	Reference	0.73 (0.61, 0.87)	0.68 (0.56, 0.82)	0.71 (0.60, 0.85)	0.83 (0.67, 1.03)	0.006	<0.001
Multivariable model 2‡	Reference	0.85 (0.71, 1.03)	0.80 (0.65, 0.98)	0.86 (0.71, 1.04)	1.03 (0.82, 1.30)	0.97	0.003
Multivariable model 3§	Reference	0.87 (0.73, 1.05)	0.81 (0.66, 0.99)	0.86 (0.72, 1.04)	1.03 (0.81, 1.29)	0.99	0.006

All values are hazard ratios (95% confidence intervals) unless otherwise stated. Cases (person-years) are shown based on the categories of baseline physical activities.
*Simple-updated model uses the most recent value of strength training on a time-varying basis.
†Multivariable model 1 is adjusted for age and trial randomization.
‡Multivariable model 2 is further adjusted for race, education, postmenopausal status, hormone use, smoking status, parental history of myocardial infarction or cancer, alcohol intake, energy intake, saturated fat, fiber intake, fruits and vegetables, physical exam for screening, and time per week spent in aerobic moderate-to-vigorous physical activity.
§Multivariable model 3 is further adjusted for body mass index and incidence of hypertension, high cholesterol, cardiovascular diseases, diabetes, and cancer before and during follow-up (for simple-updated model).
‖Baseline-value model uses baseline value of strength training. The model 3 adjusted for body mass index, hypertension, and high cholesterol at baseline.