

## Supplemental materials

**Table S1. Meta-analysis of association between total leisure time physical activity level and risk of all-cause mortality**

Survey year	Leisure time PA Level, minutes/week							
	0	10-59	60-149	150-299	300-449	450-799	800-1499	≥1500
1997	1	0.67 (0.46-0.98)	0.81 (0.66-0.99)	0.65 (0.53-0.80)	0.62 (0.49-0.77)	0.60 (0.44-0.83)	0.58 (0.42-0.81)	0.69 (0.49-0.99)
1998	1	0.82 (0.58-1.18)	0.97 (0.81-1.17)	0.87 (0.70-1.07)	0.80 (0.61-1.05)	0.52 (0.37-0.75)	0.84 (0.62-1.14)	0.52 (0.32-0.87)
1999	1	1.10 (0.78-1.56)	0.90 (0.70-1.17)	0.67 (0.52-0.87)	0.75 (0.57-1.00)	0.76 (0.55-1.06)	0.58 (0.39-0.88)	0.49 (0.28-0.86)
2000	1	0.90 (0.64-1.27)	0.57 (0.44-0.73)	0.57 (0.43-0.76)	0.66 (0.49-0.91)	0.58 (0.41-0.82)	0.58 (0.39-0.86)	0.66 (0.42-1.03)
2001	1	1.06 (0.72-1.57)	0.67 (0.50-0.90)	0.78 (0.60-1.00)	0.57 (0.39-0.85)	0.57 (0.40-0.82)	0.63 (0.42-0.94)	0.31 (0.16-0.63)
2002	1	0.73 (0.45-1.17)	0.81 (0.60-1.08)	0.77 (0.56-1.07)	0.65 (0.44-0.98)	0.55 (0.37-0.81)	0.68 (0.42-1.11)	0.60 (0.32-1.12)
2003	1	0.90 (0.54-1.50)	0.88 (0.64-1.22)	0.60 (0.40-0.89)	0.81 (0.56-1.18)	0.47 (0.30-0.74)	0.65 (0.41-1.04)	0.75 (0.35-1.61)
2004	1	0.98 (0.52-1.83)	0.76 (0.57-1.02)	0.50 (0.34-0.74)	0.63 (0.41-0.97)	0.59 (0.35-0.98)	0.46 (0.25-0.82)	0.38 (0.14-1.05)
2005	1	0.74 (0.37-1.49)	0.75 (0.51-1.10)	0.52 (0.32-0.84)	0.81 (0.51-1.27)	0.79 (0.49-1.26)	0.51 (0.27-0.97)	0.86 (0.40-1.84)
2006	1	0.37 (0.14-0.94)	0.56 (0.31-1.03)	0.72 (0.44-1.19)	0.52 (0.22-1.24)	0.44 (0.18-1.06)	0.98 (0.49-1.96)	0.49 (0.14-1.76)
2007	1	0.56 (0.12-2.64)	0.54 (0.28-1.05)	1.03 (0.62-1.71)	0.35 (0.17-0.74)	0.47 (0.21-1.04)	0.33 (0.12-0.92)	-
2008	1	0.28 (0.08-0.95)	0.70 (0.34-1.44)	0.65 (0.29-1.47)	0.51 (0.17-1.50)	0.51 (0.14-1.87)	0.74 (0.24-2.26)	0.22 (0.05-1.04)
<i>I</i> <sup>2</sup> (%)		9.2	34.0	25.8	0	0	0	22.3
Statistical model		Fixed-effects	Fixed-effects	Fixed-effects	Fixed-effects	Fixed-effects	Fixed-effects	Fixed-effects
Meta-analysis		0.85 (0.74-0.97)	0.79 (0.73-0.86)	0.70 (0.64-0.76)	0.68 (0.61-0.75)	0.59 (0.52-0.67)	0.64 (0.56-0.73)	0.58 (0.48-0.70)

Data are expressed as Hazard ratio (95% confidence interval)

Cox proportional hazards regression models were adjusted for sex, age, race/ethnicity, education, marital status, body mass index, smoking and alcohol intake

**Table S2. Stratified analysis of the association between total leisure time physical activity level and risk of all-cause mortality**

	Leisure time PA Level, minutes/week								<i>P</i> for interaction
	0	10-59	60-149	150-299	300-449	450-799	800-1499	≥1500	
<b>Age, yrs,</b>									0.0191
40-59	1	0.84 (0.65-1.08)	0.77 (0.65-0.90)	0.74 (0.63-0.87)	0.73 (0.62-0.87)	0.61 (0.51-0.73)	0.72 (0.58-0.88)	0.53 (0.40-0.69)	
≥60	1	0.76 (0.63-0.91)	0.75 (0.67-0.83)	0.62 (0.55-0.69)	0.57 (0.49-0.65)	0.47 (0.40-0.56)	0.50 (0.42-0.59)	0.44 (0.34-0.57)	
<b>Sex</b>									<0.0001
Men	1	0.83 (0.67-1.03)	0.92 (0.80-1.05)	0.78 (0.69-0.89)	0.79 (0.69-0.91)	0.66 (0.57-0.77)	0.71 (0.60-0.84)	0.56 (0.46-0.69)	
Women	1	0.82 (0.68-0.99)	0.66 (0.59-0.74)	0.60 (0.53-0.69)	0.54 (0.46-0.63)	0.48 (0.39-0.60)	0.52 (0.41-0.67)	0.53 (0.36-0.77)	
<b>Race/ethnicity</b>									0.8720
White	1	0.84 (0.71-0.99)	0.78 (0.70-0.86)	0.70 (0.63-0.77)	0.69 (0.61-0.77)	0.59 (0.51-0.67)	0.62 (0.54-0.72)	0.56 (0.46-0.68)	
Black	1	0.49 (0.31-0.77)	0.93 (0.74-1.16)	0.80 (0.60-1.07)	0.58 (0.42-0.80)	0.63 (0.44-0.90)	0.78 (0.52-1.18)	0.37 (0.18-0.78)	
Hispanic	1	1.15 (0.75-1.76)	0.78 (0.59-1.02)	0.70 (0.50-0.99)	0.61 (0.42-0.89)	0.62 (0.42-0.89)	0.65 (0.41-1.05)	0.38 (0.20-0.70)	
Other	1	0.72 (0.30-1.72)	0.65 (0.39-1.09)	0.47 (0.26-0.87)	0.85 (0.46-1.57)	0.48 (0.22-1.02)	0.62 (0.33-1.15)	0.80 (0.31-2.06)	
<b>Education</b>									0.1608
<High school	1	0.74 (0.57-0.96)	0.84 (0.73-0.98)	0.82 (0.68-0.99)	0.72 (0.57-0.91)	0.66 (0.49-0.90)	0.56 (0.41-0.75)	0.56 (0.39-0.80)	
High school	1	0.91 (0.70-1.17)	0.87 (0.75-1.00)	0.67 (0.57-0.79)	0.61 (0.50-0.74)	0.65 (0.53-0.81)	0.59 (0.46-0.77)	0.67 (0.49-0.92)	
>High school	1	0.81 (0.65-1.02)	0.69 (0.60-0.81)	0.66 (0.58-0.75)	0.69 (0.59-0.80)	0.54 (0.46-0.63)	0.68 (0.56-0.82)	0.43 (0.32-0.57)	
<b>Marital status</b>									0.4525
Married	1	0.80 (0.65-0.99)	0.77 (0.67-0.87)	0.66 (0.58-0.76)	0.69 (0.60-0.79)	0.59 (0.49-0.70)	0.64 (0.53-0.76)	0.52 (0.41-0.67)	
Divorced/separated /widowed	1	0.81 (0.67-0.98)	0.79 (0.70-0.89)	0.71 (0.62-0.81)	0.64 (0.56-0.75)	0.61 (0.52-0.72)	0.62 (0.50-0.77)	0.61 (0.47-0.80)	
Never married	1	0.98 (0.61-1.58)	0.89 (0.71-1.13)	0.84 (0.64-1.10)	0.69 (0.49-0.97)	0.54 (0.39-0.75)	0.70 (0.49-1.00)	0.40 (0.21-0.78)	
<b>BMI, kg/m<sup>2</sup></b>									0.6098
<25.0	1	0.93 (0.76-1.13)	0.74 (0.66-0.82)	0.64 (0.56-0.73)	0.66 (0.58-0.76)	0.50 (0.41-0.59)	0.53 (0.44-0.64)	0.56 (0.44-0.72)	

25.0-29.9	1	0.73 (0.56-0.95)	0.87 (0.76-1.00)	0.77 (0.66-0.90)	0.65 (0.54-0.80)	0.64 (0.52-0.78)	0.69 (0.55-0.87)	0.54 (0.40-0.72)	
≥30.0	1	0.75 (0.51-1.10)	0.76 (0.60-0.97)	0.69 (0.54-0.90)	0.80 (0.58-1.10)	0.90 (0.66-1.23)	0.98 (0.68-1.39)	0.50 (0.26-0.94)	
<b>Smoking</b>									0.0001
Never	1	0.90 (0.73-1.10)	0.72 (0.63-0.82)	0.63 (0.55-0.72)	0.64 (0.54-0.77)	0.54 (0.44-0.66)	0.60 (0.48-0.76)	0.57 (0.41-0.79)	
Former	1	0.81 (0.62-1.07)	0.86 (0.74-1.00)	0.67 (0.58-0.78)	0.67 (0.56-0.79)	0.52 (0.42-0.64)	0.63 (0.49-0.81)	0.50 (0.36-0.70)	
Current	1	0.78 (0.59-1.02)	0.81 (0.68-0.97)	0.86 (0.72-1.03)	0.78 (0.63-0.96)	0.83 (0.66-1.04)	0.73 (0.56-0.95)	0.56 (0.42-0.76)	
<b>Drinking</b>									0.1802
Abstainer	1	0.86 (0.64-1.15)	0.68 (0.58-0.81)	0.65 (0.54-0.78)	0.55 (0.42-0.73)	0.57 (0.42-0.76)	0.57 (0.42-0.77)	0.46 (0.26-0.81)	
Former	1	0.88 (0.66-1.18)	0.71 (0.59-0.86)	0.62 (0.50-0.75)	0.77 (0.63-0.93)	0.46 (0.34-0.63)	0.64 (0.49-0.84)	0.69 (0.48-0.97)	
Light to moderate	1	0.82 (0.67-1.00)	0.87 (0.76-1.00)	0.77 (0.67-0.88)	0.75 (0.64-0.86)	0.68 (0.58-0.80)	0.68 (0.57-0.82)	0.51 (0.39-0.66)	
Heavy	1	0.94 (0.47-1.87)	1.11 (0.78-1.56)	0.90 (0.65-1.23)	0.49 (0.30-0.80)	0.56 (0.38-0.83)	0.78 (0.48-1.25)	0.62 (0.35-1.09)	

Data are expressed as hazard ratio (95% confidence interval).

Cox proportional hazards regression models were adjusted for sex, age, race/ethnicity, education, marital status, body mass index, smoking and alcohol intake. The variable used for stratification was not included in the given model.