<u>Web Appendix 1: Measurements Used in This Study; NHANES 2003-2006</u>

<u>Mortality</u>

The 2003-2006 NHANES data were linked to the National Death Index by the National Center for Health Statistics, recording deaths through December 31, 2011. All-cause mortality was defined as any cause of death, except for deaths related to external causes (International Classification of Disease 10th revision V01-Y89). Participants who died of external causes were censored on their death day. Cardiovascular mortality was defined similarly to the American Heart Association definition (1), with all cardiovascular deaths coded as International Classification of Disease-10 I00-I99 and no adults had congenital heart defects (Q20-Q28) as their primary cause of death. For models using cardiovascular mortality as the outcome, those who died of other causes were censored on their death day. The follow-up period was calculated as the interval between the NHANES examination date and either the death date, censor date, or December 31, 2011, whichever occurred first.

<u>Accelerometry</u>

Those who participated in the physical activity monitor examination were asked to wear the ActiGraph accelerometer (model #AM7164; Pensacola, Florida) on their hip for seven consecutive days during waking hours and not during water-based activities. Beginning at midnight on the day following the clinic visit, the accelerometer recorded 1-minute epochs of analog acceleration and converted it to a digital signal. Non-wear was defined by an interval of at least 90 consecutive minutes of zero counts/minute, with allowance of up to 2 minutes of nonzero counts if no counts were detected during both the 30 minutes upstream and downstream from that interval (2) Any nonzero counts (except the allowed short intervals) were considered wear time. Counts in the non-wear period were set to missing. To be included in the analysis, we required >=3 adherent days with an adherent day indicating >=8 hours of accelerometer wear.

To explore total volume of physical activity, we assessed average counts/minute. We also used cutpoints originally applied to NHANES primarily from calibration studies of treadmill walking and running (3). Vigorous intensity was defined as >=5999 counts/minute, moderate intensity as 2020-5998 counts/minute, and light intensity as

100-2019 counts/minute. A lower MVPA intensity threshold was calculated based on studies that incorporated more lifestyle activities, defined as >=760 counts/minute (4), with light intensity defined between 100-759 counts/minute. We distinguished the two contrasting cutpoints by using the author's last names (Troiano and Matthews) and information about the validity of these cutpoints is available elsewhere (5-7). A MVPA bout was defined as >=10 minutes of consecutive MVPA minutes with allowance for interruptions for up to 20% of the time below the threshold and <5 consecutive minutes below the threshold. Additionally, the MVPA bout had to start and end with MVPA.

Sedentary behavior was defined as <100 counts/minute (8). Sedentary bouts were defined as >=30 minutes with at least 80% of the minutes falling below the sedentary threshold, allowing for <5 consecutive minutes above the threshold (9). Additionally, the sedentary bout had to start and end with sedentary behavior. Since sedentary behavior can be influenced by accelerometer wearing time, because a zero count represents either non-wear or sedentary behavior (10), we also explored the percent of the day spent in sedentary behavior.

Using accelerometer data, we operationalized meeting the 2008 US physical activity guidelines using their terminology (11):

- High activity: moderate physical activity>=300 minutes/week, vigorous physical activity >=150 minutes/week, or a combination of the two (multiplying vigorous by 2 and summing to obtain >=300 minutes/week) in >=10 minute bouts;
- Medium activity: moderate physical activity 150 to <300 minutes/week, vigorous physical activity 75 to <150 minutes/week, or a combination of the two (multiplying vigorous by 2 and summing to obtain 150 to <300 minutes/week) in >=10 minute bouts; and
- Not meeting recommendations.

High and medium activity were also combined to form a "meets recommendation" variable. Since participants contributed between 3 and 7 days of adherent accelerometer data, the physical activity guidelines were pro-rated for the proportion of a week with available data. This assumed that the remainder of days within the week had the same average level of physical activity as the adherent days. It is important to

note that while the weekly duration requirements were similarly derived between accelerometry and self-reported physical activity, they were not equivalent measures.

<u>Self-reported physical activity</u>

Participants were asked to report the frequency (how often) and duration (how long) of active transportation (walking or bicycling to get to and from work, school, or errands), household (home or yard), and leisure activity over the 30 days preceding the interview. The questionnaire defined moderate intensity as tasks that caused "light sweating or a slight to moderate increase in breathing or heart rate" and vigorous intensity as tasks that caused "heavy sweating or large increases in breathing or heart rate", both for at least 10 minutes at a time. Those who engaged in moderate and/or vigorous leisure activity were prompted to indicate whether they had performed any of 48 specific recreational activities. We grouped the participant-reported leisure activities and created the categories of aerobic exercise, strengthening, and walking. Metabolic equivalent (MET) values for each activity were assigned according to the physical activity compendium (12). We explored physical activities in hours/week and MET-hours/week. We also explored specific types of leisure activities reported including "walking" and "aerobic exercise" (which included indoor aerobic conditioning activities, basketball, bicycling, cross-country skiing, dance, hiking, hockey, jogging, kayaking, racquetball, tennis, skating, soccer, surfing, swimming, trampoline jumping, volleyball, and walking). Total activity was calculated by summing time spent in transportation, household, and leisure activity. We classified adults as meeting physical activity recommendations (11) if they reported >=150 minutes/week of moderate intensity aerobic activity, >=75 minutes/week of vigorous intensity aerobic activity, or an equivalent combination of the two. To estimate "meeting physical activity recommendations", we doubled the minutes of vigorous intensity aerobic activity to contribute to this criterion.

Participants answered whether in the past 30 days they did "any physical activities specifically designed to strengthen your muscles such as lifting weights, push-ups, or sit-ups?" Those that answered affirmatively reported the number of times in the past 30 days they engaged in muscle strengthening activities and we categorized responses as none, 1 day/week, or >=2 days/week. Self-reported screen time was

calculated from responses to two questions on the average number of hours/day spent watching television/videos and computer use/games in the past 30 days.

Participants self-identified into one of four categories regarding their usual daily activities: (1) you sit during the day and do not walk about very much; (2) you stand or walk about quite a lot during the day but do not have to carry or lift things very often; (3) you lift or carry light loads or have to climb stairs or hills often; or (4) you do heavy work or carry heavy loads. The final two categories were combined for the analyses. More detail on the definition and coding of the questionnaire can be found elsewhere (2003-2004: http://wwwn.cdc.gov/nchs/nhanes/2003-2004/PAQ_C.htm; 2005-2006: http://wwwn.cdc.gov/nchs/nhanes/2005-2006/PAQ_D.htm; and supplemental tables in (13)).

Other measures

Self-reported sociodemographic measures used in this study included age, race/ethnicity (Nonhispanic White, Nonhispanic Black, Hispanic, other), gender, education (less than high school, high school graduate/GED, greater than high school), household income (<$15,000, $15,000-<$35,000, $35,000-<$65,000, >=$65,000), employment, and marital status. Age above 85 years was top-coded before the data were released to protect confidentiality of the respondents, meaning all individuals above that age were assigned an age of 85 years. Employment was ascertained during the home interview and referred to work in the past week.

Participants self-reported cancer or malignancy and we categorized responses into three groups (none, non-melanoma skin cancer, any other type of cancer). Participants also self-reported arthritis, alcohol intake (categorized as >=12 drinks/year: yes or no), and smoking. Cigarette smoking was grouped as current, former (smoked at least 100 cigarettes in the past but not currently smoking), and never. Participants answered a question on assistive devices: "Because of a health problem, do you have difficulty walking without using any special equipment?" (yes or no)

Measured height and weight were used to derive body mass index, grouped as underweight (<18.5 kg/m^2), normal weight (18.5-<25 kg/m^2), overweight (25-<30 kg/m^2), obese class I (30-<35 kg/m^2), and obese class II or III (>=35 kg/m^2). Total cholesterol and C-reactive protein were measured, with the latter categorized as <0.3 or >=0.3

mg/dL (14). Hypertension was defined as hypertensive (systolic blood pressure >=140 mm Hg, diastolic blood pressure >=90 mm Hg, taking antihypertensive medications, self-reporting physician diagnosed high blood pressure), prehypertension (systolic blood pressure 120-139 mm Hg, diastolic blood pressure 80-89 mm Hg), or not hypertensive. Diabetes was defined as diabetic (physician diagnosed diabetes, undiagnosed diabetes with fasting glycosylated hemoglobin >=6.5%), prediabetes (>=5.7% to 6.4%), or not diabetic (14).

References

1. Go AS, Mozaffarian D, Roger VL, et al. Heart disease and stroke statistics--2014 update: a report from the American Heart Association. *Circulation.* 2014;129(3):e28-e292.

2. Choi L, Liu Z, Matthews CE, et al. Validation of accelerometer wear and nonwear time classification algorithm. *Med Sci Sports Exerc.* 2011;43(2):357-364.

3. Troiano R, Berrigan D, Dodd K, et al. Physical activity in the United States measured by accelerometer. *Med Sci Sports Exerc.* 2008;40(1):181-188.

4. Matthews C. Calibration of accelerometer output for adults. *Med Sci Sports Exerc.* 2005;37(11 Suppl):S512-S522.

5. Welk GJ, McClain JJ, Eisenmann JC, et al. Field validation of the MTI Actigraph and BodyMedia armband monitor using the IDEEA monitor. *Obesity.* 2007;15(4):918-928.

6. Crouter SE, DellaValle DM, Haas JD, et al. Validity of ActiGraph 2-regression model, Matthews cut-points, and NHANES cut-points for assessing free-living physical activity. *J Phys Act Health.* 2013;10(4):504-514.

7. Matthews CE, Keadle SK, Sampson J, et al. Validation of a previous-day recall measure of active and sedentary behaviors. *Med Sci Sports Exerc.* 2013;45(8):1629-1638.

8. Matthews C, Chen K, Freedson P, et al. Amount of time spent in sedentary behaviors in the United States, 2003-2004. *Am J Epidemiol.* 2008;167(7):875-881.

9. Carson V, Janssen I. Volume, patterns, and types of sedentary behavior and cardio-metabolic health in children and adolescents: a cross-sectional study. *BMC Public Health.* 2011;11:274, 1-10.

10. Evenson KR, Wen F. Performance of the ActiGraph accelerometer using a national population-based sample of youth and adults. *BMC Res Notes.* 2015;8:7, 1-7.

11. U.S. Department of Health and Human Services. 2008 Physical Activity Guidelines for Americans. ODPHP Publication No. U0036. Washington, D.C. http://health.gov/paguidelines/pdf/paguide.pdf. Published October 2008. Accessed February 29, 2016.

12. Ainsworth BE, Haskell WL, Herrmann SD, et al. 2011 Compendium of Physical Activities: A Second Update of Codes and MET Values. *Med Sci Sports Exerc.* 2011;43(8):1575-1581.

13. Evenson K, Wen F. National trends in self-reported physical activity and sedentary behaviors among pregnant women: NHANES 1999-2006. *Prev Med.* 2010;50:123-128.

14. Zhao G, Li C, Ford ES, et al. Leisure-time aerobic physical activity, muscle-strengthening activity and mortality risks among US adults: the NHANES linked mortality study. *Br J Sports Med.* 2014;48(3):244-249.

Web Table 1: Adjusted hazard ratios of all-cause and cardiovascular disease mortality on accelerometer assessed physical activity (Troiano 2008 (34) cutpoints) and sedentary behavior (Matthews 2008 (36) cutpoints) showing models 1, 1a, and 2 (n=3809), NHANES 2003-2006

Accelerometer Measures	All-cause mortality						CVD mortality					
		Model 1		Model 1a		Model 2		Model 1		Model 1a		Model 2
	No. of deaths	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value	No. of deaths	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value
Average counts/minute			<.0001		<.0001		**			0.002		0.002		**
Highest quartile (>=355.4)	26	0.38 (0.24, 0.60)		0.38 (0.24, 0.60)				7	0.35 (0.15, 0.81)		0.35 (0.15, 0.81)		
3rd quartile (255.7-355.3)	36	0.39 (0.26, 0.56)		0.39 (0.26, 0.56)				12	0.41 (0.21, 0.78)		0.41 (0.21, 0.78)		
2nd quartile (178.5-255.6)	70	0.58 (0.44, 0.77)		0.58 (0.44, 0.77)				19	0.47 (0.28, 0.80)		0.47 (0.28, 0.80)		
Lowest quartile (<=178.4)	193	1.00		1.00				69	1.00		1.00		
Light physical activity, minutes/day			0.002		0.003		0.16			0.20		0.28		0.59
Highest quartile (>=392.4)	35	0.54 (0.37, 0.80)		0.55 (0.37, 0.82)		0.71 (0.48, 1.07)		11	0.62 (0.31, 1.22)		0.65 (0.32, 1.31)		0.85 (0.42, 1.74)	
3rd quartile (324.4-392.3)	51	0.60 (0.43, 0.83)		0.60 (0.43, 0.84)		0.71 (0.51, 0.99)		14	0.56 (0.30, 1.02)		0.57 (0.31, 1.06)		0.68 (0.36, 1.25)	
2nd quartile (257.7-324.3)	79	0.78 (0.59, 1.03)		0.78 (0.59, 1.03)		0.88 (0.66, 1.16)		28	0.88 (0.55, 1.41)		0.89 (0.56, 1.43)		1.03 (0.64, 1.66)	
Lowest quartile (<=257.6)	160	1.00		1.00		1.00		54	1.00		1.00		1.00	
Moderate physical activity, minutes/day			<.0001		<.0001		<.0001			0.0003		0.0004		0.003
Highest quartile (>=24.5)	30	0.38 (0.24, 0.58)		0.38 (0.25, 0.59)		0.48 (0.30, 0.75)		11	0.47 (0.23, 0.96)		0.48 (0.23, 0.99)		0.60 (0.28, 1.29)	
3rd quartile (11.1-24=3.4)	33	0.35 (0.24, 0.52)		0.35 (0.24, 0.53)		0.42 (0.28, 0.63)		5	0.17 (0.07, 0.44)		0.18 (0.07, 0.45)		0.19 (0.07, 0.50)	
2nd quartile (3.8-11.0)	65	0.48 (0.36, 0.65)		0.48 (0.36, 0.65)		0.56 (0.41, 0.76)		21	0.47 (0.28, 0.79)		0.48 (0.29, 0.79)		0.51 (0.30, 0.88)	
Lowest quartile (<=3.7)	197	1.00		1.00		1.00		70	1.00		1.00		1.00	
Vigorous physical activity, minutes/day			0.09		0.10		0.86			0.27		0.30		0.78
>=0.1 mins/day	38	0.74 (0.52, 1.04)		0.74 (0.52, 1.06)		0.97 (0.67, 1.39)		11	0.70 (0.37, 1.33)		0.71 (0.37, 1.36)		0.91 (0.47, 1.76)	
0 mins/day	287	1.00		1.00		1.00		96	1.00		1.00		1.00	
Moderate to vigorous physical activity, minutes/day			<.0001		<.0001		<.0001			0.0003		0.0004		0.001
Highest quartile (>=25.1)	30	0.38 (0.25, 0.59)		0.39 (0.25, 0.60)		0.46 (0.29, 0.72)		11	0.47 (0.23, 0.98)		0.49 (0.23, 1.01)		0.50 (0.23, 1.05)	
3rd quartile (11.2-25.0)	33	0.34 (0.23, 0.51)		0.35 (0.23, 0.52)		0.41 (0.27, 0.61)		5	0.17 (0.07, 0.44)		0.17 (0.07, 0.45)		0.18 (0.07, 0.47)	
2nd quartile (3.9-11.1)	64	0.48 (0.36, 0.64)		0.48 (0.36, 0.64)		0.55 (0.41, 0.76)		21	0.48 (0.29, 0.80)		0.48 (0.29, 0.81)		0.50 (0.29, 0.86)	
Lowest quartile (<=3.8)	198	1.00		1.00		1.00		70	1.00		1.00		1.00	
Moderate to vigorous physical activity bouts, minutes/day			0.002		0.003		0.02			0.01		0.01		0.02
>=8.4 mins/day	34	0.70 (0.48, 1.01)		0.70 (0.49, 1.02)		0.73 (0.50, 1.05)		11	0.67 (0.35, 1.29)		0.68 (0.36, 1.31)		0.69 (0.36, 1.32)	
0.1 -8.3 mins/day	28	0.53 (0.36, 0.78)		0.54 (0.36, 0.80)		0.60 (0.40, 0.90)		*	0.23 (0.09, 0.64)		0.24 (0.09, 0.66)		0.25 (0.09, 0.68)	
0 mins/day	263	1.00		1.00		1.00		92	1.00		1.00		1.00	
>=150 minutes/week of moderate or >=75 minutes/week of vigorous or equivalent combination			0.03		0.03		0.13			0.51		0.59		0.73
Yes	37	0.65 (0.46, 0.94)		0.67 (0.46, 0.96)		0.75 (0.52, 1.09)		13	0.81 (0.44, 1.50)		0.84 (0.46, 1.57)		0.90 (0.48, 1.67)	
No	288	1.00		1.00		1.00		94	1.00		1.00		1.00	

	N	HR (95% CI)	HR (95% CI)	HR (95% CI)	N	HR (95% CI)	HR (95% CI)	HR (95% CI)
Sedentary, minutes/day		0.22	0.03	0.70		0.24	0.03	0.55
Highest quartile (>=588.4)	128	1.42 (0.98, 2.06)	1.80 (1.20, 2.72)	0.97 (0.66, 1.44)	48	1.79 (0.92, 3.49)	2.67 (1.28, 5.54)	1.46 (0.72, 2.93)
3rd quartile (497.7-588.3)	81	1.15 (0.78, 1.69)	1.30 (0.87, 1.93)	0.88 (0.59, 1.30)	26	1.25 (0.62, 2.53)	1.53 (0.74, 3.14)	1.07 (0.52, 2.19)
2nd quartile (413.5-497.6)	74	1.28 (0.87, 1.88)	1.36 (0.92, 2.00)	1.07 (0.73, 1.57)	21	1.28 (0.62, 2.62)	1.41 (0.69, 2.91)	1.15 (0.56, 2.36)
Lowest quartile (<=413.4)	42	1.00	1.00	1.00	12	1.00	1.00	1.00
Sedentary bouts, minutes/day		0.01	0.001	0.17		0.03	0.01	0.10
Highest quartile (>=518.4)	150	1.30 (0.90, 1.89)	1.52 (1.03, 2.25)	0.75 (0.48, 1.16)	55	1.27 (0.67, 2.40)	1.57 (0.81, 3.08)	1.00 (0.48, 2.08)
3rd quartile (380.7-518.3)	80	0.99 (0.67, 1.46)	1.05 (0.71, 1.56)	0.69 (0.45, 1.04)	25	0.84 (0.42, 1.66)	0.91 (0.46, 1.82)	0.72 (0.35, 1.47)
2nd quartile (265.0-380.6)	53	0.77 (0.51, 1.16)	0.81 (0.53, 1.23)	0.64 (0.42, 0.97)	13	0.53 (0.25, 1.15)	0.57 (0.26, 1.22)	0.48 (0.22, 1.05)
Lowest quartile (<=264.9)	42	1.00	1.00	1.00	14	1.00	1.00	1.00
Percent of day in sedentary behavior		<.0001	***	0.28		0.04	***	0.22
Highest quartile (>=67.7%)	171	1.85 (1.23, 2.77)		0.86 (0.48, 1.54)	58	1.52 (0.75, 3.06)		1.14 (0.42, 3.06)
3rd quartile (60.1%-67.6%)	72	1.17 (0.76, 1.80)		0.72 (0.44, 1.18)	26	1.09 (0.52, 2.27)		0.88 (0.38, 2.06)
2nd quartile (51.4%-60.0%)	49	0.93 (0.59, 1.46)		0.70 (0.44, 1.12)	12	0.61 (0.27, 1.41)		0.53 (0.23, 1.26)
Lowest quartile (<=51.3%)	33	1.00		1.00	11	1.00		1.00

CI, confidence interval; CVD, cardiovascular disease; HR, hazard ratio

Model 1 adjusted for age (40-49, 50-59, 60-69, >=70), gender (male, female), race/ethnicity (Nonhispanic White, Nonhispanic Black, Hispanic, other), education (< high school, high school or GED, > high school), married (yes, no), cigarette smoking (never, former, current), current employment (yes, no), current employment*follow-up time, need special equipment to walk (yes, no), arthritis (yes, no), and cancer (no, non-melanoma skin cancer, any other type of cancer).

Model 1a adjusted for covariates in model 1 along with average daily accelerometer wear time.

Model 2 adjusted for covariates in model 1 along with other physical activity/sedentary behavior components which varied by exposure:

Light physical activity adjusted for combined sedentary and moderate to vigorous physical activity.

Moderate physical activity adjusted for sedentary, light, and vigorous.

Vigorous physical activity adjusted for sedentary, light, and moderate.

Moderate to vigorous physical activity (including bouts) adjusted for sedentary and light.

>=150 minutes/week of moderate or >=75 minutes/week of vigorous or equivalent combination adjusted for sedentary and light.

Sedentary (including bouts and percent) adjusted for light and moderate to vigorous physical activity.

*: The number of deaths for this category was based on small counts and not considered reliable.

**: Average counts per minute did not adjust for other physical activity/sedentary behavior components.

***For percent of day in sedentary behavior, average daily accelerometer wear time was not adjusted for in these models.

Web Table 2: Adjusted hazard ratios of all-cause and cardiovascular disease mortality on accelerometer assessed physical activity (Matthews 2005 (35) and 2008 (36) cutpoints; n=3809), NHANES 2003-2006

| | All-cause mortality | | | | | | | | | CVD mortality | | | | | | | | |
| | | Model 1 | | Model 1a | | Model 2 | | Model 3 | | | Model 1 | | Model 1a | | Model 2 | | Model 3 | |
Accelerometer Measures	No. of deaths	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value	No. of deaths	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value
Light, minutes/day			0.05		0.07		0.30		0.29			0.68		0.72		0.30		0.36
Highest quartile (>=303.7)	55	0.74 (0.53, 1.02)		0.76 (0.54, 1.05)		1.26 (0.88, 1.80)		1.24 (0.87, 1.77)		20	0.94 (0.54, 1.62)		0.98 (0.56, 1.72)		1.78 (0.97, 3.27)		1.72 (0.93, 3.16)	
3rd quartile (256.3-303.6)	62	0.74 (0.54, 1.00)		0.75 (0.55, 1.02)		1.13 (0.81, 1.58)		1.13 (0.81, 1.57)		17	0.70 (0.40, 1.25)		0.73 (0.41, 1.30)		1.17 (0.63, 2.17)		1.17 (0.63, 2.17)	
2nd quartile (209.7-256.2)	68	0.70 (0.52, 0.93)		0.70 (0.52, 0.94)		0.90 (0.66, 1.21)		0.88 (0.65, 1.19)		25	0.87 (0.53, 1.43)		0.88 (0.54, 1.45)		1.18 (0.70, 1.98)		1.11 (0.66, 1.87)	
Lowest quartile (<=209.6)	140	1.00		1.00		1.00		1.00		45	1.00		1.00		1.00		1.00	
Moderate (lifestyle) physical activity, minutes/day			<.0001		<.0001		0.0002		0.0007			0.002		0.002		0.02		0.03
Highest quartile (>=102.9)	25	0.32 (0.20, 0.50)		0.32 (0.20, 0.51)		0.44 (0.26, 0.74)		0.46 (0.27, 0.79)		6	0.28 (0.11, 0.68)		0.28 (0.12, 0.70)		0.31 (0.11, 0.84)		0.33 (0.12, 0.90)	
3rd quartile (70.0-102.8)	33	0.35 (0.23, 0.51)		0.35 (0.24, 0.52)		0.41 (0.27, 0.63)		0.43 (0.28, 0.67)		9	0.32 (0.15, 0.67)		0.33 (0.16, 0.68)		0.33 (0.15, 0.72)		0.34 (0.16, 0.76)	
2nd quartile (42.7-69.9)	67	0.59 (0.44, 0.78)		0.59 (0.44, 0.78)		0.64 (0.47, 0.88)		0.68 (0.49, 0.92)		23	0.63 (0.38, 1.02)		0.63 (0.38, 1.03)		0.62 (0.36, 1.05)		0.64 (0.37, 1.09)	
Lowest quartile (<=42.6)	200	1.00		1.00		1.00		1.00		69	1.00		1.00		1.00		1.00	
Moderate (lifestyle) to vigorous physical activity, minutes/day			<.0001		<.0001		<.0001		<.0001			0.001		0.001		0.001		0.001
Highest quartile (>=128.7)	25	0.33 (0.21, 0.53)		0.34 (0.21, 0.54)		0.36 (0.22, 0.59)		0.37 (0.22, 0.60)		5	0.24 (0.09, 0.64)		0.24 (0.09, 0.66)		0.21 (0.08, 0.59)		0.22 (0.08, 0.62)	
3rd quartile (86.1-128.6)	30	0.31 (0.20, 0.46)		0.31 (0.20, 0.46)		0.32 (0.21, 0.49)		0.33 (0.21, 0.50)		12	0.39 (0.20, 0.76)		0.40 (0.21, 0.78)		0.36 (0.18, 0.71)		0.36 (0.18, 0.72)	
2nd quartile (50.0-86.0)	72	0.58 (0.44, 0.77)		0.58 (0.44, 0.77)		0.60 (0.45, 0.81)		0.62 (0.46, 0.84)		19	0.46 (0.27, 0.77)		0.46 (0.27, 0.78)		0.42 (0.24, 0.72)		0.43 (0.25, 0.75)	
Lowest quartile (<=49.9)	198	1.00		1.00		1.00		1.00		71	1.00		1.00		1.00		1.00	
Moderate (lifestyle) to vigorous physical activity bouts, minutes/day			<.0001		<.0001		<.0001		<.0001			0.001		0.002		0.002		0.003
>=25.6	58	0.31 (0.22, 0.44)		0.31 (0.22, 0.44)		0.32 (0.23, 0.46)		0.33 (0.23, 0.47)		18	0.35 (0.19, 0.63)		0.36 (0.19, 0.65)		0.34 (0.18, 0.63)		0.35 (0.18, 0.65)	
0.1-25.5	138	0.52 (0.40, 0.66)		0.52 (0.40, 0.67)		0.53 (0.41, 0.69)		0.54 (0.41, 0.70)		46	0.56 (0.36, 0.86)		0.57 (0.37, 0.87)		0.54 (0.34, 0.85)		0.54 (0.34, 0.86)	
0	129	1.00		1.00		1.00		1.00		43	1.00		1.00		1.00		1.00	

CI, confidence interval; CVD, cardiovascular disease; HR, hazard ratio

Model 1 adjusted for age (40-49, 50-59, 60-69, >=70), gender (male, female), race/ethnicity (Nonhispanic White, Nonhispanic Black, Hispanic, other), education (< high school, high school or GED, > high school), married (yes, no), cigarette smoking (never, former, current), current employment (yes, no), current employment*follow-up time, need special equipment to walk (yes, no), arthritis (yes, no), and cancer (no, non-melanoma skin cancer, any other type of cancer).

Model 1a adjusted for covariates in model 1 along with average daily accelerometer wear time.

Model 2 adjusted for covariates in model 1 along with other physical activity/sedentary behavior components, which varied by exposure:
Light physical activity adjusted for sedentary and moderate to vigorous physical activity.
Moderate (lifestyle) physical activity adjusted for sedentary, light, and vigorous.
Moderate (lifestyle) to vigorous physical activity (including bouts) adjusted for sedentary and light.

Model 3 adjusted for covariates in model 2 along with body mass index (underweight, normal, overweight, obese class I, obese class II/III), body mass index (for each category)*follow-up time, hypertension (no, prehypertension, yes), and diabetes (no, prediabetes, yes).

Web Table 3: Adjusted hazard ratios of all-cause mortality on accelerometer assessed physical activity and sedentary behavior, including participants with prevalent cardiovascular disease (n=4510), NHANES 2003-2006

Accelerometer Measures	All-cause mortality		
	No. of deaths	HR (95% CI)	P-value
Average counts/minute			<.0001
Highest quartile (>=355.4)	33	0.38 (0.25, 0.57)	
3rd quartile (255.7-355.3)	47	0.38 (0.27, 0.53)	
2nd quartile (178.5-255.6)	89	0.59 (0.46, 0.76)	
Lowest quartile (<=178.4)	330	1.00	
Troiano et al., 2008 (34) cutpoints:			
Light physical activity, minutes/day			0.07
Highest quartile (>=392.4)	51	0.77 (0.55, 1.09)	
3rd quartile (324.4-372.3)	71	0.69 (0.52, 0.92)	
2nd quartile (257.7-324.3)	109	0.90 (0.71, 1.14)	
Lowest quartile (<=257.6)	268	1.00	
Moderate physical activity, minutes/day			<.0001
Highest quartile (>=24.5)	36	0.49 (0.33, 0.73)	
3rd quartile 11.1-24.4)	48	0.45 (0.32, 0.65)	
2nd quartile (3.8-11.0)	84	0.56 (0.43, 0.72)	
Lowest quartile (<=3.7)	331	1.00	
Vigorous physical activity, minutes/day			0.76
>=0.1 mins/day	57	0.95 (0.71, 1.29)	
0 mins/day	442	1.00	
Moderate to vigorous physical activity, minutes/day			<.0001
Highest quartile (>=25.1)	35	0.45 (0.31, 0.67)	
3rd quartile (11.2-25.0)	47	0.45 (0.31, 0.64)	
2nd quartile (3.9-11.1)	87	0.56 (0.43, 0.73)	
Lowest quartile (<=3.8)	330	1.00	
Moderate to vigorous physical activity bouts, minutes/day			0.005
>=8.4	40	0.66 (0.47, 0.93)	
0.1-8.3	41	0.65 (0.46, 0.91)	
0	418	1.00	
>=150 minutes/week of moderate or >=75 minutes/week of vigorous or equivalent combination			0.04
Yes	46	0.71 (0.51, 0.99)	
No	453	1.00	
Matthews et al., 2005 (35) and 2008 (36) cutpoints:			
Light, minutes/day			0.73
Highest quartile (>=303.7)	68	1.10 (0.82, 1.49)	
3rd quartile (256.3-303.6)	78	0.97 (0.73, 1.29)	
2nd quartile (209.7-256.2)	131	0.92 (0.73, 1.18)	
Lowest quartile (<=209.6)	222	1.00	

Moderate (lifestyle) to vigorous physical activity, minutes/day			<.0001
Highest quartile (>=128.7)	34	0.45 (0.29, 0.69)	
3rd quartile (86.1-128.6)	45	0.33 (0.23, 0.48)	
2nd quartile (50.0-86.0)	88	0.63 (0.48, 0.81)	
Lowest quartile (<=49.9)	332	1.00	
Moderate (lifestyle) to vigorous physical activity bouts, minutes/day			<.0001
>=25.6	86	0.42 (0.31, 0.57)	
0.1-25.5	188	0.57 (0.46, 0.71)	
0	225	1.00	
Moderate (lifestyle) physical activity, minutes/day			0.0004
Highest quartile (>=102.9)	38	0.69 (0.44, 1.08)	
3rd quartile (70.0-102.8)	43	0.46 (0.32, 0.67)	
2nd quartile (42.7-69.9)	91	0.71 (0.54, 0.92)	
Lowest quartile (<=42.6)	327	1.00	
Sedentary, minutes/day			0.78
Highest quartile (>=588.4)	220	1.16 (0.83, 1.62)	
3rd quartile (497.7-588.3)	111	1.08 (0.77, 1.51)	
2nd quartile (413.5-497.6)	103	1.16 (0.82, 1.63)	
Lowest quartile (<=413.4)	65	1.00	
Sedentary bouts, minutes/day			0.58
Highest quartile (>=518.4)	251	0.94 (0.64, 1.37)	
3rd quartile (380.7-518.3)	118	0.83 (0.58, 1.21)	
2nd quartile (265.0-380.6)	84	0.84 (0.58, 1.22)	
Lowest quartile (<=264.9)	46	1.00	
Percent of day in sedentary behavior			0.11
Highest quartile (>=67.7%)	301	0.80 (0.49, 1.28)	
3rd quartile (60.1%-67.6%)	92	0.68 (0.45, 1.03)	
2nd quartile (51.4%-60.0%)	62	0.66 (0.44, 0.99)	
Lowest quartile (<=51.3%)	44	1.00	

CI, confidence interval; CVD, cardiovascular disease; HR, hazard ratio

Presented here are full models (model 3) adjusted for age (40-49, 50-59, 60-69, >=70), gender (male, female), race/ethnicity (Nonhispanic White, Nonhispanic Black, Hispanic, other), education (< high school, high school or GED, > high school), married (yes, no), cigarette smoking (never, former, current), current employment (yes, no), current employment*follow-up time, need special equipment to walk (yes, no), arthritis (yes, no), cancer (no, non-melanoma skin cancer, any other type of cancer), angina (yes, no), myocardial infarction (yes, no), stroke (yes, no), coronary heart disease (yes, no), congestive heart failure (yes, no), body mass index (underweight, normal, overweight, obese class I, obese class II/III), body mass index*follow-up time, hypertension (no, prehypertension, yes), and diabetes (no, prediabetes, yes).

Full models also adjusted for other physical activity/sedentary behavior components, which varied by exposure:
Light physical activity adjusted for sedentary and moderate to vigorous physical activity.
Moderate physical activity adjusted for sedentary, light, and vigorous.
Vigorous physical activity adjusted for sedentary, light, and moderate.
Moderate to vigorous physical activity (including bouts) adjusted for sedentary and light.
>=150 minutes/week of moderate or >=75 minutes/week of vigorous or equivalent combination adjusted for sedentary and light.
Sedentary (including bouts and percent) adjusted for light and moderate to vigorous physical activity.
Average counts per minute did not adjust for other physical activity/sedentary behavior components.

Web Table 4: Adjusted hazard ratios of all-cause and cardiovascular disease mortality on self-reported physical activity and sedentary behavior showing models 1 and 2 (n=3809); NHANES 2003-2006

Self-reported Physical Activity and Sedentary Behavior Measures	All-cause mortality					CVD mortality				
		Model 1		Model 2			Model 1		Model 2	
	No. of deaths	HR (95% CI)	P-value	HR (95% CI)	P-value	No. of deaths	HR (95% CI)	P-value	HR (95% CI)	P-value
Transportation activity, hours/week			0.87		0.86			0.64		0.37
>=3.6	13	0.92 (0.53, 1.61)		1.05 (0.60, 1.85)		6	1.32 (0.57, 3.04)		1.68 (0.72, 3.92)	
0.1-3.5	22	1.10 (0.71, 1.71)		1.13 (0.73, 1.74)		9	1.30 (0.65, 2.60)		1.34 (0.67, 2.67)	
0	290	1.00		1.00		92	1.00		1.00	
Moderate to vigorous household activity, hours/week			0.007		0.01			0.03		0.02
>=2.0	65	0.62 (0.46, 0.83)		0.63 (0.46, 0.86)		16	0.45 (0.26, 0.81)		0.44 (0.25, 0.78)	
0.1-1.9	91	0.83 (0.64, 1.08)		0.84 (0.64, 1.09)		31	0.88 (0.56, 1.38)		0.86 (0.54, 1.35)	
0	169	1.00		1.00		60	1.00		1.00	
Moderate leisure activity			0.0001		0.0002			0.02		0.03
>=2.3	67	0.64 (0.48, 0.86)		0.66 (0.49, 0.88)		18	0.51 (0.30, 0.88)		0.52 (0.30, 0.89)	
0.1-2.2	47	0.55 (0.40, 0.76)		0.55 (0.40, 0.76)		17	0.61 (0.36, 1.05)		0.63 (0.36, 1.08)	
0	211	1.00		1.00		72	1.00		1.00	
Vigorous leisure activity, hours/week			0.03		0.06			0.12		0.15
>=0.1	30	0.65 (0.44, 0.96)		0.68 (0.46, 1.01)		8	0.56 (0.27, 1.18)		0.58 (0.27, 1.22)	
0	295	1.00		1.00		99	1.00		1.00	
Total moderate to vigorous leisure activity, hours/week			0.002		0.003			0.03		0.03
>=3.0	63	0.63 (0.47, 0.85)		0.64 (0.47, 0.87)		16	0.48 (0.27, 0.85)		0.47 (0.27, 0.84)	
0.1-2.9	68	0.68 (0.51, 0.90)		0.68 (0.51, 0.90)		24	0.72 (0.45, 1.17)		0.73 (0.45, 1.19)	
0	194	1.00		1.00		67	1.00		1.00	
Walking, hours/week			0.0005		0.0008			0.003		0.003
>=1.7	43	0.65 (0.47, 0.90)		0.67 (0.48, 0.94)		8	0.33 (0.16, 0.70)		0.34 (0.16, 0.71)	
0.1-1.6	27	0.51 (0.34, 0.77)		0.51 (0.34, 0.77)		9	0.49 (0.24, 0.98)		0.49 (0.24, 0.97)	
0	255	1.00		1.00		90	1.00		1.00	
Aerobic exercise, hours/week			0.007		0.009			0.02		0.02
>=2.4	59	0.68 (0.51, 0.92)		0.70 (0.52, 0.94)		13	0.43 (0.24, 0.79)		0.43 (0.23, 0.79)	
0.1-2.3	55	0.68 (0.50, 0.92)		0.68 (0.50, 0.92)		20	0.73 (0.44, 1.20)		0.74 (0.45, 1.23)	
0	211	1.00		1.00		74	1.00		1.00	

	N	HR (95% CI)	HR (95% CI)	N	HR (95% CI)	HR (95% CI)
Total physical activity, hours/week^		0.006	0.006		0.011	0.006
Highest tertile (>=5.5)	81	0.64 (0.49, 0.86)	0.64 (0.48, 0.86)	22	0.47 (0.28, 0.80)	0.45 (0.27, 0.76)
2nd tertile (1.2-5.4)	87	0.74 (0.56, 0.97)	0.74 (0.56, 0.97)	27	0.63 (0.39, 1.00)	0.61 (0.38, 0.97)
Lowest tertile (<=1.1)	157	1.00	1.00	58	1.00	1.00
Screen time, hours/week		0.16	0.20		0.86	0.83
Highest tertile (>=3.6)	140	1.04 (0.81, 1.34)	1.01 (0.78, 1.30)	44	0.95 (0.61, 1.48)	0.91 (0.58, 1.43)
2nd tertile (2.1-3.5)	66	0.78 (0.58, 1.06)	0.78 (0.58, 1.06)	24	0.87 (0.52, 1.45)	0.86 (0.51, 1.44)
Lowest tertile (<=2.0)	118	1.00	1.00	39	1.00	1.00
Meet physical activity recommendations		0.012	0.03		0.010	0.01
Meet	70	0.70 (0.53, 0.93)	0.73 (0.55, 0.97)	17	0.49 (0.29, 0.84)	0.48 (0.28, 0.84)
Not meet	255	1.00	1.00	90	1.00	1.00
Muscle strengthening, times/week		0.08	0.12		0.27	0.32
2 or more	35	0.71 (0.50, 1.02)	0.75 (0.52, 1.07)	11	0.73 (0.38, 1.38)	0.76 (0.40, 1.46)
1	8	0.59 (0.29, 1.20)	0.60 (0.29, 1.21)	6	1.67 (0.71, 3.91)	1.65 (0.70, 3.88)
0	282	1.00	1.00	90	1.00	1.00
Usual daily activities		0.0001	*		0.23	*
Carrying, lifting light loads, heavy work	44	0.54 (0.37, 0.77)		17	0.76 (0.42, 1.39)	
Mostly standing, walking without carrying, or lifting	160	0.62 (0.48, 0.80)		51	0.68 (0.44, 1.06)	
Mostly sitting	121	1.00		39	1.00	

CI, confidence interval; CVD, cardiovascular disease; HR, hazard ratio

^ Total hours/week = (transportation + household + moderate leisure activity + vigorous leisure activity)

Model 1 adjusted for age (40-49, 50-59, 60-69, >=70), gender (male, female), race/ethnicity (Nonhispanic White, Nonhispanic Black, Hispanic, other), education (< high school, high school or GED, > high school), married (yes, no), cigarette smoking (never, former, current), current employment (yes, no), current employment*follow-up time, need special equipment to walk (yes, no), arthritis (yes, no), and cancer (no, non-melanoma skin cancer, any other type of cancer).

Model 2 adjusted for covariates in model 1 along with other physical activity/sedentary behavior components which varied by exposure:
Transportation activity adjusted for (total-transportation) and screen time.
Moderate to vigorous household adjusted for (total- moderate to vigorous household) and screen time.
Moderate leisure activity adjusted for (total-moderate leisure) and screen time.
Vigorous leisure activity adjusted for (total-vigorous leisure) and screen time.
Total moderate to vigorous leisure activity adjusted for (total-moderate to vigorous leisure) and screen time.
Walking adjusted for (total-walking) and screen time.
Aerobic exercise adjusted for (total-aerobic) and screen time.

Total physical activity adjusted for screen time.

Screen time adjusted for total physical activity.

Meeting physical activity guidelines adjusted for (total-aerobic) and screen time.

Muscle strengthening adjusted for screen time.

Usual daily activities did not adjust for other physical activity components.

Web Table 5: Adjusted hazard ratios of all-cause and cardiovascular disease mortality on self-reported physical activity and sedentary behavior (n=3809)

| | All-cause mortality | | | | | | | CVD mortality | | | | | | |
| | | Model 1 | | Model 2 | | Model 3 | | | Model 1 | | Model 2 | | Model 3 | |
Self-reported Physical Activity and Sedentary Behavior Measures	No. of deaths	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value	No. of deaths	HR (95% CI)	P-value	HR (95% CI)	P-value	HR (95% CI)	P-value
Transportation activity, MET-hours/week			0.87		0.86		0.88			0.64		0.37		0.42
>=14.1	13	0.92 (0.53, 1.61)		1.05 (0.60, 1.85)		1.02 (0.58, 1.80)		6	1.32 (0.57, 3.04)		1.68 (0.72, 3.93)		1.64 (0.70, 3.83)	
0.1-14.0	22	1.10 (0.71, 1.71)		1.13 (0.73, 1.75)		1.12 (0.72, 1.74)		9	1.30 (0.65, 2.60)		1.35 (0.67, 2.69)		1.31 (0.65, 2.62)	
0	290	1.00		1.00		1.00		92	1.00		1.00		1.00	
Moderate to vigorous household activity, MET-hours/week			0.007		0.01		0.02			0.03		0.02		0.02
>=8.5	65	0.62 (0.46, 0.83)		0.63 (0.47, 0.86)		0.65 (0.48, 0.88)		16	0.45 (0.26, 0.81)		0.44 (0.25, 0.79)		0.44 (0.25, 0.79)	
0.1-8.4	91	0.83 (0.64, 1.08)		0.84 (0.64, 1.09)		0.85 (0.65, 1.11)		31	0.88 (0.56, 1.38)		0.86 (0.55, 1.36)		0.85 (0.54, 1.34)	
0	169	1.00		1.00		1.00		60	1.00		1.00		1.00	
Moderate leisure activity, MET-hours/week			0.0001		0.0002		0.0002			0.03		0.04		0.04
>=8.3	65	0.65 (0.48, 0.86)		0.66 (0.49, 0.89)		0.66 (0.49, 0.88)		18	0.54 (0.31, 0.92)		0.55 (0.32, 0.95)		0.55 (0.32, 0.95)	
0.1-8.2	49	0.55 (0.40, 0.76)		0.55 (0.40, 0.76)		0.55 (0.40, 0.76)		17	0.58 (0.34, 0.99)		0.60 (0.35, 1.03)		0.60 (0.35, 1.03)	
0	211	1.00		1.00		1.00		72	1.00		1.00		1.00	
Vigorous leisure activity, MET-hours/week			0.03		0.06		0.06			0.12		0.15		0.15
>=0.1	30	0.65 (0.44, 0.96)		0.68 (0.46, 1.01)		0.68 (0.46, 1.01)		8	0.56 (0.27, 1.18)		0.58 (0.27, 1.22)		0.58 (0.27, 1.23)	
0	295	1.00		1.00		1.00		99	1.00		1.00		1.00	
Moderate to vigorous leisure activity, MET-hours/week			0.002		0.002		0.0013			0.04		0.04		0.04
>=12.4	58	0.60 (0.44, 0.82)		0.61 (0.45, 0.84)		0.60 (0.44, 0.82)		16	0.51 (0.29, 0.89)		0.50 (0.28, 0.89)		0.49 (0.28, 0.88)	
0.1-12.3	73	0.70 (0.53, 0.93)		0.70 (0.53, 0.92)		0.69 (0.52, 0.91)		24	0.69 (0.43, 1.12)		0.70 (0.43, 1.13)		0.70 (0.43, 1.13)	
0	194	1.00		1.00		1.00		67	1.00		1.00		1.00	
Walking, MET-hours/week			0.0005		0.0008		0.0003			0.003		0.004		0.003
>=5.6	43	0.65 (0.47, 0.90)		0.68 (0.48, 0.94)		0.65 (0.46, 0.90)		8	0.33 (0.16, 0.70)		0.34 (0.16, 0.72)		0.32 (0.16, 0.68)	
0.1-5.5	27	0.51 (0.34, 0.77)		0.51 (0.34, 0.77)		0.50 (0.33, 0.75)		9	0.49 (0.24, 0.98)		0.49 (0.24, 0.98)		0.48 (0.24, 0.97)	
0	255	1.00		1.00		1.00		90	1.00		1.00		1.00	
Aerobic exercise, MET-hours/week			0.006		0.008		0.005			0.02		0.02		0.01
>=10.7	51	0.64 (0.47, 0.88)		0.65 (0.47, 0.90)		0.64 (0.46, 0.88)		11	0.40 (0.21, 0.76)		0.39 (0.21, 0.76)		0.38 (0.20, 0.74)	
0.1-10.6	63	0.72 (0.54, 0.96)		0.71 (0.53, 0.96)		0.70 (0.52, 0.94)		22	0.73 (0.45, 1.19)		0.75 (0.46, 1.22)		0.75 (0.46, 1.22)	
0	211	1.00		1.00		1.00		74	1.00		1.00		1.00	
Total physical activity, MET-hours/week^			0.008		0.007		0.008			0.010		0.007		0.006
Highest tertile (>=25.3)	79	0.66 (0.50, 0.88)		0.66 (0.50, 0.88)		0.67 (0.50, 0.89)		19	0.44 (0.25, 0.76)		0.42 (0.24, 0.73)		0.42 (0.24, 0.72)	
2nd tertile (4.5-25.2)	90	0.73 (0.55, 0.95)		0.72 (0.55, 0.95)		0.71 (0.54, 0.94)		31	0.69 (0.44, 1.08)		0.68 (0.43, 1.07)		0.66 (0.42, 1.05)	
Lowest tertile (<=4.4)	156	1.00		1.00		1.00		57	1.00		1.00		1.00	

Screen time, MET-hours/week		0.04	0.06	0.04		0.78	0.67	0.64
Highest tertile (>=4.1)	114	1.07 (0.82, 1.40)	1.03 (0.79, 1.35)	1.05 (0.80, 1.37)	31	0.84 (0.52, 1.37)	0.80 (0.49, 1.31)	0.79 (0.48, 1.30)
2nd tertile (2.1-4.0)	93	0.76 (0.58, 1.00)	0.76 (0.58, 1.00)	0.75 (0.57, 0.99)	37	0.90 (0.57, 1.42)	0.89 (0.57, 1.40)	0.88 (0.56, 1.39)
Lowest tertile (<=2.0)	117	1.00	1.00	1.00	39	1.00	1.00	1.00

CI, confidence interval; CVD, cardiovascular disease; HR, hazard ratio; MET, metabolic equivalent
^Total MET-hours/week = (transportation + household + moderate leisure activity + vigorous leisure activity)

Model 1 adjusted for age (40-49, 50-59, 60-69, >=70), gender (male, female), race/ethnicity (Nonhispanic White, Nonhispanic Black, Hispanic, other), education (< high school, high school or GED, > high school), married (yes, no), cigarette smoking (never, former, current), current employment (yes, no), current employment*follow-up time, need special equipment to walk (yes, no), arthritis (yes, no), and cancer (no, non-melanoma skin cancer, any other type of cancer).

Model 2 adjusted for covariates in model 1 along with other physical activity/sedentary behavior components, which varied by exposure:
Transportation activity adjusted for (total-transportation) and screen time.
Moderate to vigorous household adjusted for (total- moderate to vigorous household) and screen time.
Moderate leisure activity adjusted for (total-moderate leisure) and screen time.
Vigorous leisure activity adjusted for (total-vigorous leisure) and screen time.
Total moderate to vigorous leisure activity adjusted for (total-moderate to vigorous leisure) and screen time.
Walking adjusted for (total-walking) and screen time.
Aerobic exercise adjusted for (total-aerobic) and screen time.
Total physical activity adjusted for screen time.
Screen time adjusted for total physical activity.

Model 3 adjusted for covariates in model 2 along with body mass index (underweight, normal, overweight, obese class I, obese class II/III), body mass index categories*follow-up time, hypertension (no, prehypertension, yes), and diabetes (no, prediabetes, yes).

Web Table 6: Adjusted hazard ratios of all-cause mortality on self-reported physical activity and sedentary behavior, including participants with prevalent cardiovascular disease (n=4510), NHANES 2003-2006

Self-reported Physical Activity and Sedentary Behavior Measures	All-cause Mortality HR (95% CI)	P-value
Transportation activity, hours/week		0.69
>=3.6	0.92 (0.57, 1.49)	
0.1-3.5	1.16 (0.79, 1.70)	
0	1.00	
Moderate to vigorous household activity, hours/week		0.007
>=2.0	0.67 (0.52, 0.86)	
0.1-1.9	0.85 (0.69, 1.06)	
0	1.00	
Moderate leisure activity, hours/week		<.0001
>=2.3	0.65 (0.51, 0.83)	
0.1-2.2	0.64 (0.50, 0.83)	
0	1.00	
Vigorous leisure activity, hours/week		0.03
>=0.1	0.68 (0.48, 0.95)	
0	1.00	
Moderate to vigorous leisure activity, hours/week		<.0001
>=3.0	0.60 (0.47, 0.77)	
0.1-2.9	0.72 (0.58, 0.91)	
0	1.00	
Walking, hours/week		0.0006
>=1.7	0.61 (0.46, 0.80)	
0.1-1.6	0.73 (0.54, 0.98)	
0	1.00	
Aerobic exercise, hours/week		0.0002
>=2.4	0.61 (0.48, 0.79)	
0.1-2.3	0.74 (0.58, 0.95)	
0	1.00	
Total physical activity, hours/week^		<.0001
Highest tertile (>=5.5)	0.60 (0.48, 0.76)	
2nd tertile (1.2-5.4)	0.68 (0.55, 0.85)	
Lowest tertile (<=1.1)	1.00	
Screen time, hours/week		0.15
Highest tertile (>=3.6)	0.98 (0.79, 1.21)	
2nd tertile (2.1-3.5)	0.80 (0.63, 1.01)	
Lowest tertile (<=2.0)	1.00	
Meet physical activity recommendations		0.003
Meet	0.69 (0.55, 0.88)	
Not meet	1.00	
Muscle strengthening, times/week		0.13
2 or more	0.83 (0.63, 1.10)	
1	0.57 (0.29, 1.12)	
0	1.00	

Usual daily activities		<.0001
Carrying, lifting light loads, heavy work	0.56 (0.42, 0.76)	
Mostly standing, walking without carrying, or lifting	0.63 (0.52, 0.77)	
Mostly sitting	1.00	

CI, confidence interval; CVD, cardiovascular disease; HR, hazard ratio

^ Total hours/week = (transportation + household + moderate leisure activity + vigorous leisure activity)

Presented here are full models (model 3) adjusted for age (40-49, 50-59, 60-69, >=70), gender (male, female), race/ethnicity (Nonhispanic White, Nonhispanic Black, Hispanic, other), education (< high school, high school or GED, > high school), married (yes, no), cigarette smoking (never, former, current), current employment (yes, no), current employment*follow-up time, need special equipment to walk (yes, no), arthritis (yes, no), cancer (no, non-melanoma skin cancer, any other type of cancer), angina (yes, no), myocardial infarction (yes, no), stroke (yes, no), coronary heart disease (yes, no), congestive heart failure (yes, no), body mass index (underweight, normal, overweight, obese class I, obese class II/III), body mass index categories*follow-up time, hypertension (no, prehypertension, yes), and diabetes (no, prediabetes, yes).

Full models also adjusted for other physical activity/sedentary behavior components, which varied by exposure:

Transportation activity adjusted for (total-transportation) and screen time.

Moderate to vigorous household adjusted for (total-moderate to vigorous household) and screen time.

Moderate leisure activity adjusted for (total-moderate leisure) and screen time.

Vigorous leisure activity adjusted for (total-vigorous leisure) and screen time.

Total moderate to vigorous leisure activity adjusted for (total-moderate to vigorous leisure) and screen time.

Walking adjusted for (total-walking) and screen time.

Aerobic exercise adjusted for (total-aerobic) and screen time.

Total physical activity adjusted for screen time.

Screen time adjusted for total physical activity.

Meeting physical activity guidelines adjusted for (total-aerobic) and screen time.

Muscle strengthening adjusted for screen time.

Usual daily activities did not adjust for other physical activity components.

Web Table 7: Adjusted hazard ratios of all-cause mortality on self-reported physical activity and sedentary behavior, including participants with prevalent cardiovascular disease (n=4510), NHANES 2003-2006

Self-reported Physical Activity and Sedentary Behavior Measures	All-cause Mortality	
	HR (95% CI)	P-value
Transportation activity, MET-hours/week		0.69
>=14.1	0.92 (0.57, 1.49)	
0.1-14.0	1.16 (0.80, 1.70)	
0	1.00	
Moderate to vigorous household activity, MET-hours/week		0.008
>=8.5	0.67 (0.52, 0.86)	
0.1-8.4	0.85 (0.69, 1.06)	
0	1.00	
Moderate leisure activity, MET-hours/week		<.0001
>=8.3	0.66 (0.52, 0.84)	
0.1-8.2	0.64 (0.50, 0.82)	
0	1.00	
Vigorous leisure activity, MET-hours/week		0.02
>=0.1	0.67 (0.48, 0.95)	
0	1.00	
Moderate to vigorous leisure activity, MET-hours/week		<.0001
>=12.4	0.60 (0.46, 0.78)	
0.1-12.3	0.72 (0.57, 0.90)	
0	1.00	
Walking, MET-hours/week		0.0007
>=5.6	0.61 (0.46, 0.81)	
0.1-5.5	0.73 (0.54, 0.98)	
0	1.00	
Aerobic exercise, MET-hours/week		<.0001
>=10.7	0.57 (0.44, 0.75)	
0.1-10.6	0.77 (0.61, 0.97)	
0	1.00	
Total physical activity, MET-hours/week^		<.0001
Highest tertile (>=25.3)	0.61 (0.48, 0.78)	
2nd tertile (4.5-25.2)	0.67 (0.54, 0.83)	
Lowest tertile (<=4.4)	1.00	

Screen time, MET-hours/week		0.01
Highest tertile (>=4.1)	1.04 (0.83, 1.29)	
2nd tertile (2.1-4.0)	0.75 (0.60, 0.93)	
Lowest tertile (<=2.0)	1.00	

CI, confidence interval; CVD, cardiovascular disease; HR, hazard ratio; MET, metabolic equivalent

^Total MET-hrs/wk = (transportation + household + moderate leisure activity + vigorous leisure activity)

Presented here are full models (model 3) adjusted for age (40-49, 50-59, 60-69, >=70), gender (male, female), race/ethnicity (Nonhispanic White, Nonhispanic Black, Hispanic, other), education (< high school, high school or GED, > high school), married (yes, no), cigarette smoking (never, former, current), current employment (yes, no), current employment*follow-up time, need special equipment to walk (yes, no), arthritis (yes, no), cancer (no, non-melanoma skin cancer, any other type of cancer), angina (yes, no), myocardial infarction (yes, no), stroke (yes, no), coronary heart disease (yes, no), congestive heart failure (yes, no), body mass index (underweight, normal, overweight, obese class I, obese class II/III), body mass index categories*follow-up time, hypertension (no, prehypertension, yes), and diabetes (no, prediabetes, yes).

Full models also adjusted for other physical activity components, which varied by exposure:

Transportation activity adjusted for (total-transportation) and screen time.

Moderate to vigorous household adjusted for (total- moderate to vigorous household) and screen time.

Moderate leisure activity adjusted for (total-moderate leisure) and screen time.

Vigorous leisure activity adjusted for (total-vigorous leisure) and screen time.

Total moderate to vigorous leisure activity adjusted for (total-moderate to vigorous leisure) and screen time.

Walking adjusted for (total-walking) and screen time.

Aerobic exercise adjusted for (total-aerobic) and screen time.

Total physical activity adjusted for screen time.

Screen time adjusted for total physical activity.