SUPPLEMENTAL MATERIAL

Jeanette M. Garcia, et al

Data S1. SUPPLEMENTAL METHODS

Covariates: Sociodemographic characteristics (age, sex, education), lifestyle behaviors (cigarette smoking, alcohol consumption, healthful diet), cardiovascular risk factors (body mass index, hypertension, diabetes) and medical history (history of myocardial infarction, history of stroke) were included as covariates.

Standard questionnaires were administered to participants by trained interviewers in order to obtain socioeconomic status information. Education was measured as the highest level of schooling completed and classified into six categories: less than high school; high school diploma or graduate equivalency degree; vocational training or some college; associate's degree; bachelor's degree; and postgraduate degree. Alcohol consumption was determined by a 5-item, interview administered questionnaire that inquired whether the participant had ever consumed alcohol and both the quantity and frequency information about alcohol intake in the past 12 months. Heavy alcohol was defined as drinking more than 14 drinks per week for men or more than seven drinks per week for women. Current smoking status was defined as any participant who had smoked at least 400 cigarettes in their lifetime and was currently smoking at the time of their in-home visit. Diet was assessed using a 158-item food frequency questionnaire (FFQ) adapted from the Lower Mississippi Delta Nutrition Intervention Research Initiative FFQ that was designed for assessing diet of the U.S. population living in the South (1). A healthful diet was defined according to the American Heart Association Life's Simple 7 criteria for the following components: fruits and vegetables $\geq$ 4.5 cups/day, fish > 3.5 ounces twice/week, sodium <1500 mg/day, sugary beverages <450 kcal/week, whole grains $\geq$ 3 servings/day. Diet was rated as poor if it contained 0-1 of these components, intermediate if contained 2-3 components, and ideal if it contained 4-5 of these components.

Body Mass Index (BMI) was calculated as the ratio of in-clinic measurements of weight (in kilograms) to height (in meters squared). Seated blood pressure measurements were obtained at the clinical examination by trained staff with a Hawksley random-zero sphygmomanometer (Hawksley and Sons Ltd.) in the right arm after a 5-minute rest. The random-zero blood pressure measurements were calibrated to a semi-automated oscillometric device using robust regression as previously described (Abdalla et al., 2016). Hypertension was defined as systolic blood pressure ≥140mmHg, diastolic blood pressure ≥90 mmHg, or being on antihypertensive medication. Diabetes was defined as a serum glucose ≥126 mg⁄dL for participants who had fasted ≥8 hours prior to their blood draw, a serum glucose ≥200 mg⁄dL for those who had not fasted, or a self-report of a prior diagnosis of diabetes with use of insulin or oral hypoglycemic medications. History of myocardial infarction (MI) was defined as a self-reported or ECG evidence of MI. History of stroke was defined on the basis of self-report.

SUPPLMENTAL REFERENCES

1. Abdalla M, Booth JN, 3rd, Seals SR, Spruill TM, Viera AJ, Diaz KM, Sims M, Muntner P, Shimbo D. Masked hypertension and incident clinic hypertension among blacks in the Jackson Heart Study. Hypertension. 2016; 68(1):220-26.

SUPPLMENTAL TABLES

Table S1: Characteristics of JHS participants (n=3,592) by category of occupational sitting.

Variable	Occupational Sitting			P-Trend
	Never/Seldom *(n=1007)*	Sometimes *(n=1033)*	Often/Always *(n=1552)*	
Age (years)	52.5 ± 12.6	51.4 ± 10.9	50.3 ± 11.1	<0.001
Male sex (%)	42.8	40.7	35.8	<0.001
Education < HS (%)	19.4	12.0	6.6	<0.001
Income < $50,000 (%)	72.7	65.2	56.0	<0.001
Heavy alcohol drinking (%)[a]	5.3	4.3	3.3	0.014
Current Smoking (%)	16.8	14.9	9.8	<0.001
Healthful Diet[b]				0.019
Poor	65.2	64.0	60.6	
Intermediate	34.1	35.2	38.9	
Ideal	0.7	0.8	0.6	
BMI (kg/m^2)[c]	30.8 ± 7.0	31.6 ± 7.1	32.3 ± 7.6	<0.001
Hypertension (%)[d]	50.8	47.3	46.7	0.114
Diabetes (%)[e]	16.6	16.1	16.7	0.916
History of MI (%)[f]	3.7	3.2	2.4	0.055
History of Stroke (%)	2.2	2.5	2.3	0.957
Level of MVPA (%)[g]				<0.001
Poor	47.7	48.3	37.7	
Intermediate	32.2	33.5	37.9	
Ideal	20.2	18.2	24.4	

Data presented as mean ± standard deviation or percentage.

HS, high school; MVPA, moderate or vigorous physical activity.

[a]Defined as >14 drinks/week for men; >7 drinks/week for women.

[b]Defined according to American Heart Association Life's Simple 7 criteria for the following components: fruits and vegetables ≥4.5 cups/day, fish >3.5 ounces twice/week, sodium <1500 mg/day, sugary beverages <450 kcal/week, whole grains ≥3 servings/day. Poor diet: 0-1

[c]Body mass index

components; intermediate diet: 2-3 components; and ideal diet: 4-5 components.

[d]Defined as systolic blood pressure ≥140 mmHg, diastolic blood pressure ≥90 mmHg, or use of anti–hypertension medication.

[e]Defined as fasting glucose ≥126 mg/dL, HbA1c ≥6.5%, or use of anti–diabetes mellitus medication.

[f]History of myocardial infarction was defined as a self-reported history of health care provider-diagnosed myocardial infarction

[g]Defined according to American Heart Association Life's Simple 7 criteria for minutes/week of moderate or vigorous physical activity. Poor physical activity: 0 minutes/week of leisure-time moderate or vigorous physical activity. Intermediate physical activity: >0 and <150 minutes/week of leisure-time moderate physical activity, and >0 and <75 minutes/week of leisure-time vigorous physical activity. Ideal physical activity: ≥150 minutes/week of leisure-time moderate physical activity or ≥75 minutes/week of leisure-time vigorous physical activity.

Table S2: Hazard ratios for CVD events associated with sedentary behavior domains in Jackson Heart Study participants.

Sedentary Domain	No. of events/No. at risk	Hazard Ratio (95% CI) for CVD Events				
		Unadjusted	Model 1	Model 2	Model 3	Model 4
TV Viewing						
<2 hours/day	45/1174	1(ref)	1(ref)	1(ref)	1(ref)	1(ref)
2-4 hours/day	55/1306	1.13 (0.75-1.69)	1.10 (0.74-1.66)	1.10 (0.73-1.65)	1.10 (0.73-1.65)	1.10 (0.73-1.66)
>4 hours/day	68/1112	1.66 (1.12-2.45)	1.52 (1.03-2.25)	1.44 (0.97-2.13)	1.43 (0.96-2.12)	1.43 (0.96-2.12)
		P-Trend=0.010	P-Trend=0.032	P-Trend=0.065	P-Trend=0.072	P-Trend=0.071
Occupational Sitting						
Never or Seldom	55/1007	1(ref)	1(ref)	1(ref)	1(ref)	1(ref)
Sometimes	48/1033	0.82 (0.55-1.23)	1.00 (0.67-1.50)	1.02 (0.68-1.53)	1.01 (0.67-1.52)	1.01 (0.67-1.51)
Often or Always	65/1552	0.76 (0.53-1.10)	0.99 (0.68-1.44)	1.06 (0.73-1.54)	1.06 (0.73-1.55)	1.06 (0.73-1.55)
		P-Trend=0.155	P-Trend=0.959	P-Trend=0.764	P-Trend=0.746	P-Trend=0.744

Model 1: Adjusted for age and sex.

Model 2: Adjusted for covariates in Model 1 plus education, heavy alcohol drinking, smoking, healthful diet category, body mass index, hypertension, diabetes, history of myocardial infarction, and history of stroke.

Model 3: Adjusted for covariates in Model 2 plus leisure-time moderate or vigorous physical activity.

Model 4: Adjusted for covariates in Model 3 plus occupational sitting (for television viewing analyses) or television viewing (for occupational sitting analyses).

Table S3: Hazard ratios for all-cause mortality associated with sedentary behavior domains in Jackson Heart Study participants.

Sedentary Domain	No. of events/No. at risk	Hazard Ratio (95% CI) for All-Cause Mortality				
		Unadjusted	Model 1	Model 2	Model 3	Model 4
TV Viewing						
<2 hours/day	50/1174	1(ref)	1(ref)	1(ref)	1(ref)	1(ref)
2-4 hours/day	61/1306	1.14 (0.78-1.68)	1.10 (0.75-1.62)	1.01 (0.69-1.49)	1.00 (0.68-1.48)	1.00 (0.68-1.47)
>4 hours/day	94/1112	2.04 (1.43-2.91)	1.84 (1.29-2.63)	1.62 (1.13-2.32)	1.63 (1.14-2.34)	1.64 (1.14-2.35)
		P-Trend<0.001	P-Trend<0.001	P-Trend=0.005	P-Trend=0.004	P-Trend=0.004
Occupational Sitting						
Never or Seldom	66/1007	1(ref)	1(ref)	1(ref)	1(ref)	1(ref)
Sometimes	68/1033	1.08 (0.76-1.53)	1.30 (0.91-1.84)	1.22 (0.86-1.74)	1.23 (0.87-1.75)	1.22 (0.86-1.73)
Often or Always	71/1552	0.69 (0.49-0.98)	0.88 (0.62-1.25)	0.85 (0.60-1.21)	0.85 (0.60-1.21)	0.83 (0.59-1.18)
		P-Trend=0.030	P-Trend=0.429	P-Trend=0.335	P-Trend=0.337	P-Trend=0.281

Model 1: Adjusted for age and sex.

Model 2: Adjusted for covariates in Model 1 plus education, heavy alcohol drinking, smoking, healthful diet category, body mass index, hypertension, diabetes, history of myocardial infarction, and history of stroke.

Model 3: Adjusted for covariates in Model 2 plus leisure-time moderate or vigorous physical activity.

Model 4: Adjusted for covariates in Model 3 plus occupational sitting (for television viewing analyses) or television viewing (for occupational sitting analyses).

Table S4: Hazard ratios for pooled outcomes (CVD events and all-cause mortality) associated with TV viewing stratified by physical activity category in Jackson Heart Study participants (n=3592).

TV Viewing	No. of events/No. at risk	Hazard Ratio (95% CI) for Pooled Outcomes
	Inactive/Intermediate MVPA (n=2822)	
<2 hours/day	68/890	1 (ref)
2-4 hours/day	78/1001	1.01 (0.72-1.41)
>4 hours/day	131/931	1.69 (1.25-2.30)
		P-Trend <0.001
	Ideal MVPA (n=770)	
<2 hours/day	19/284	1 (ref)
2-4 hours/day	26/305	0.95 (0.50-1.79)
>4 hours/day	12/181	0.69 (0.30-1.58)
		P-Trend=0.405

Models adjusted for age, sex, education, heavy alcohol drinking, current smoking, healthful diet category, body mass index, hypertension, diabetes, history of myocardial infarction, history of stroke, and occupational sitting.

Table S5: Hazard ratios for pooled outcomes (CVD events and all-cause mortality) associated with sedentary behavior domains in Jackson Heart Study participants excluding deaths in the first year of follow-up (n=3586).

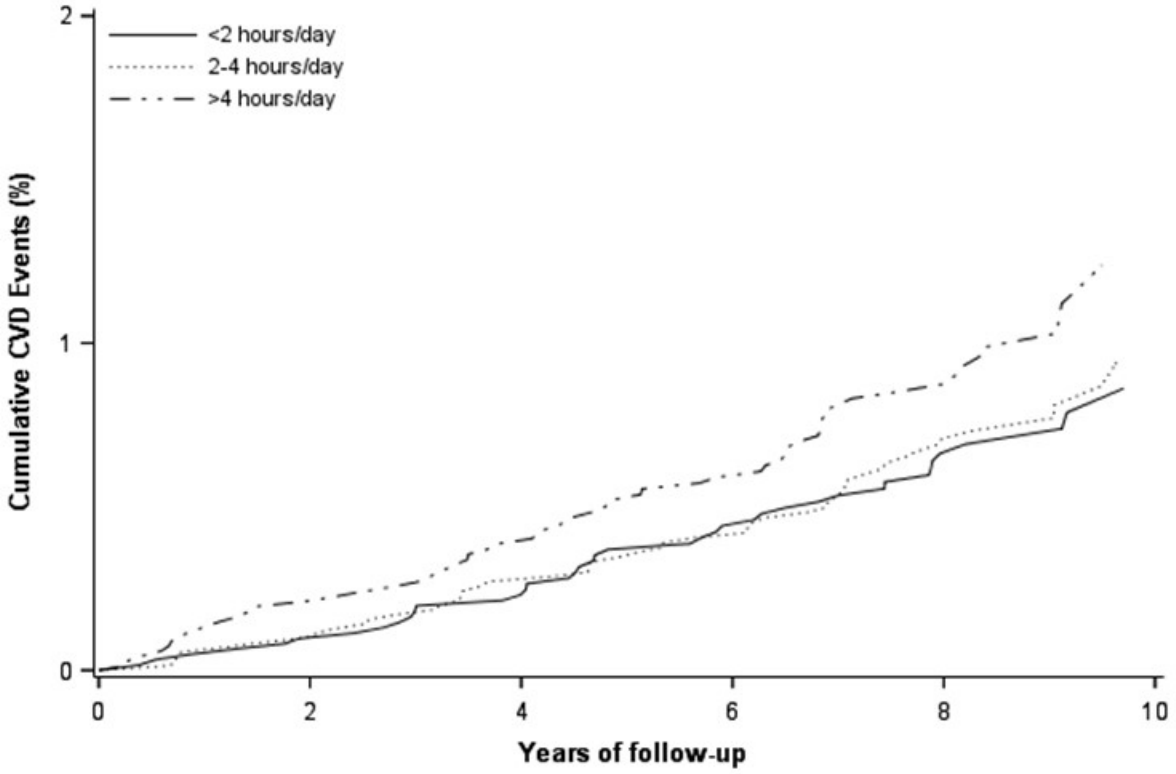
Sedentary Domain	No. of events/No. at risk	Hazard Ratio (95% CI) for Pooled Outcomes				
		Unadjusted	Model 1	Model 2	Model 3	Model 4
TV Viewing						
<2 hours/day	86/1173	1(ref)	1(ref)	1(ref)	1(ref)	1(ref)
2-4 hours/day	101/1303	1.09 (0.81-1.47)	1.06 (0.79-1.43)	1.01 (0.75-1.35)	1.01 (0.75-1.35)	1.00 (0.75-1.35)
>4 hours/day	141/1110	1.79 (1.36-2.37)	1.64 (1.24-2.16)	1.50 (1.14-1.99)	1.50 (1.13-1.98)	1.50 (1.13-1.98)
		P-Trend<0.001	P-Trend<0.001	P-Trend=0.003	P-Trend=0.003	P-Trend=0.003
Occupational Sitting						
Never or Seldom	109/1005	1(ref)	1(ref)	1(ref)	1(ref)	1(ref)
Sometimes	100/1032	0.91 (0.69-1.21)	1.10 (0.83-1.46)	1.08 (0.81-1.43)	1.07 (0.81-1.42)	1.07 (0.81-1.42)
Often or Always	119/1549	0.70 (0.53-0.91)	0.89 (0.68-1.16)	0.90 (0.69-1.18)	0.90 (0.69-1.18)	0.90 (0.68-1.18)
		P-Trend=0.007	P-Trend=0.363	P-Trend=0.430	P-Trend=0.439	P-Trend=0.413

Model 1: Adjusted for age and sex.

Model 2: Adjusted for covariates in Model 1 plus education, heavy alcohol drinking, current smoking, healthful diet category, body mass index, hypertension, diabetes, history of myocardial infarction, and history of stroke.

Model 3: Adjusted for covariates in Model 2 plus leisure-time moderate or vigorous physical activity.

Model 4: Adjusted for covariates in Model 3 plus occupational sitting (for television viewing analyses) or television viewing (for occupational sitting analyses).


<2 hours/day
2-4 hours/day
>4 hours/day
Cumulative CVD Events (%)
0
1
2
0
2
4
6
8
10
Years of follow-up

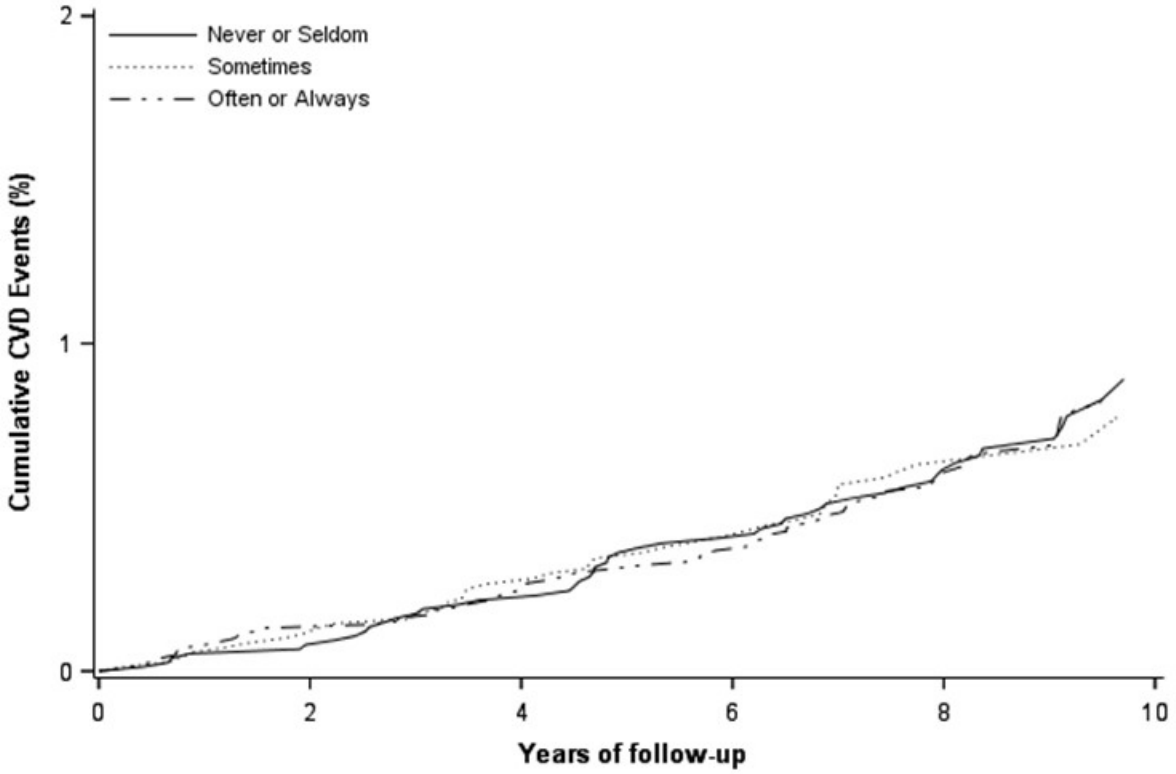
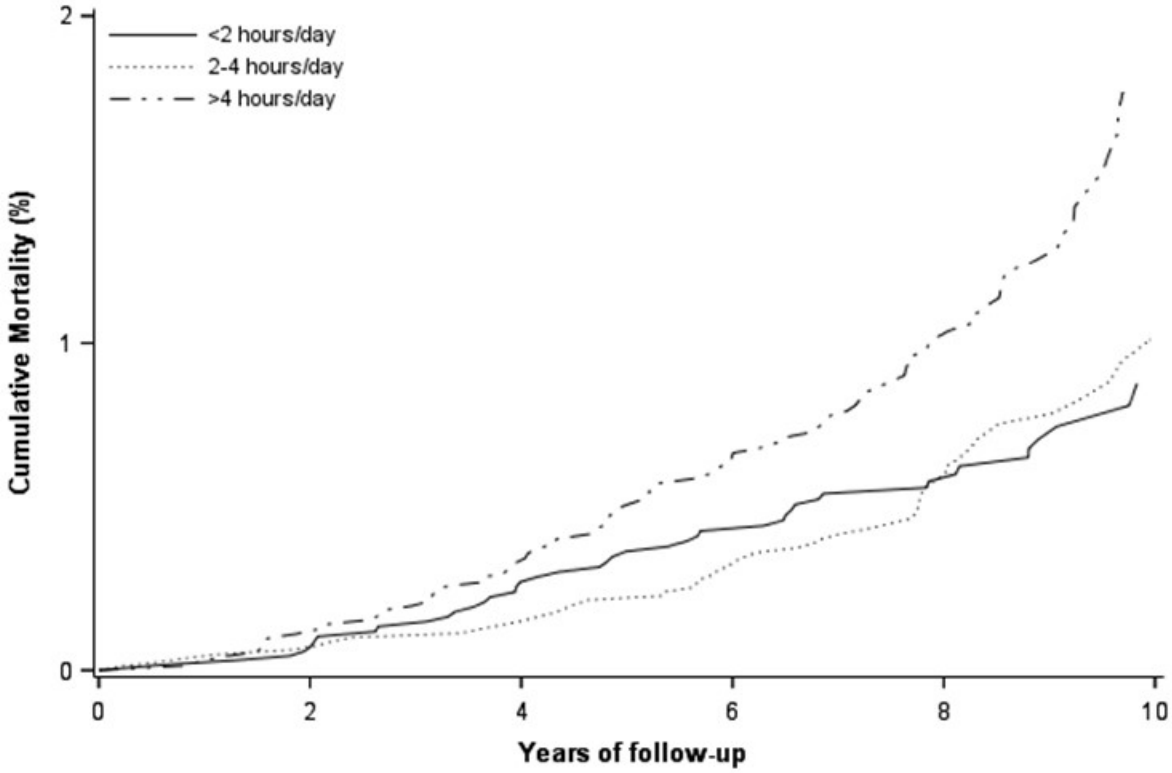

Never or Seldom
Sometimes
Often or Always
Cumulative CVD Events (%)
0
1
2
0
2
4
6
8
10
Years of follow-up

Figure S1: Adjusted cumulative CVD events by TV Viewing (Top) and Occupational Sitting (Bottom) categories. Models adjusted for age, sex, education, heavy alcohol drinking, current smoking, healthful diet category, body mass index, hypertension, diabetes, history of myocardial infarction, history of stroke, leisure time moderate or vigorous physical activity, and occupational sitting (for television viewing analyses) or television viewing (for occupational sitting analyses). Cumulative CVD events = estimated failure function (1-S(t)) derived from Kaplan-Meier curves.


<2 hours/day
2-4 hours/day
>4 hours/day
Cumulative Mortality (%)
0
1
2
0
2
4
6
8
10
Years of follow-up

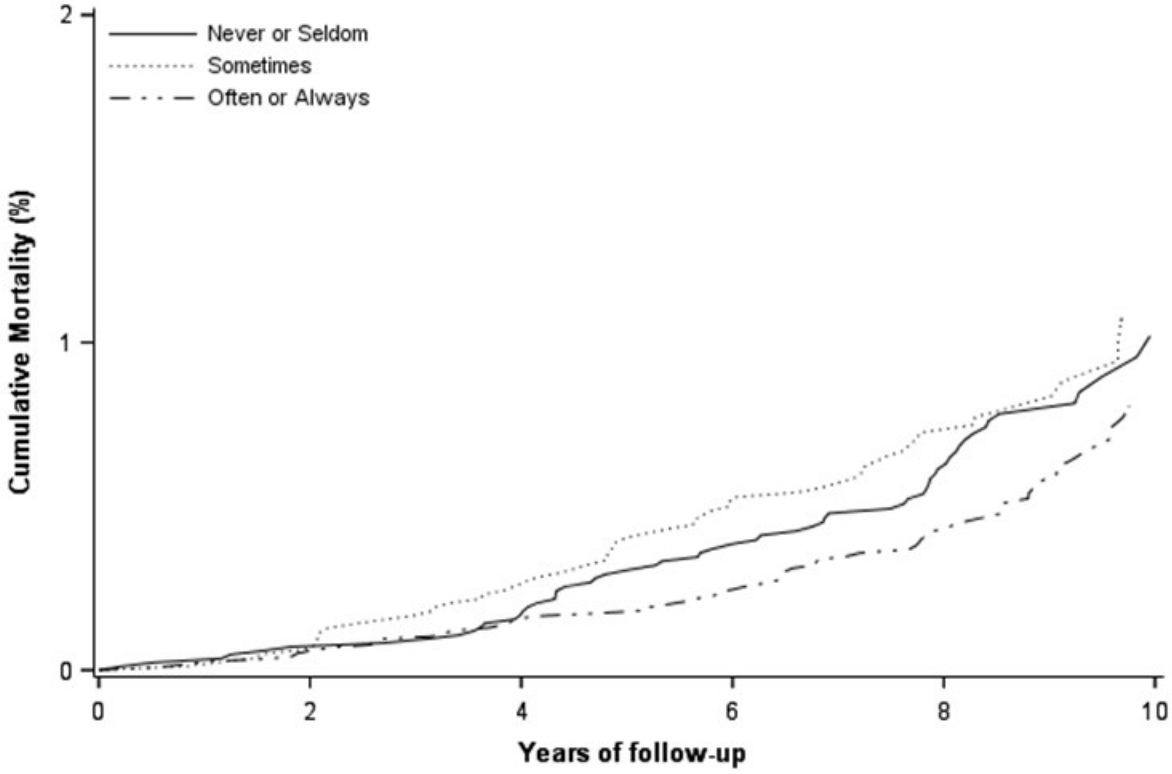

Never or Seldom
Sometimes
Often or Always
Cumulative Mortality (%)
0
1
2
0
2
4
6
8
10
Years of follow-up

Figure S2: Adjusted cumulative mortality by TV Viewing (Top) and Occupational Sitting (Bottom) categories. Models adjusted for age, sex, education, heavy alcohol drinking, current smoking, healthful diet category, body mass index, hypertension, diabetes, history of myocardial infarction, history of stroke, leisure time moderate or vigorous physical activity, and occupational sitting (for television viewing analyses) or television viewing (for occupational sitting analyses). Cumulative mortality = estimated failure function (1-S(t)) derived from Kaplan-Meier curves.