

Physical Activity, Sedentary Behaviors and the Incidence of Type 2 Diabetes Mellitus: The Multi-Ethnic Study of Atherosclerosis (MESA)

Running Title: Physical Activity, Sedentary Behavior and Incident Diabetes

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Online-Only Supplemental Material – TABLES & FIGURES

Supplementary Table S1. The Association between Activity measures and Incident Type 2 Diabetes in All Participants adjusted for reciprocal activity measures

Activity Measures*		Hazard Ratio among All Participants		
		Unadjusted	Model 1†	Model 2‡
Moderate-Vigorous PA§	Quartile 1	Ref.	Ref.	Ref.
	Quartile 2	0.74 (0.59, 0.92)	0.78 (0.63, 0.97)	0.78 (0.63, 0.97)
	Quartile 3	0.77 (0.63, 0.96)	0.78 (0.63, 0.97)	0.79 (0.64, 0.98)
	Quartile 4	0.88 (0.71, 1.08)	0.84 (0.68, 1.04)	0.86 (0.69, 1.06)
Leisure Sedentary Behavior	0-2 hours	Ref.	Ref.	Ref.
	2.01-4 hours	1.19 (0.98, 1.45)	1.21 (1.00, 1.48)	1.21 (1.00, 1.47)
	4.01-6 hours	1.46 (1.17, 1.83)	1.43 (1.13, 1.80)	1.44 (1.14, 1.81)
	>6 hours	1.70 (1.31, 2.19)	1.65 (1.26, 2.14)	1.66 (1.27, 2.15)

*Activity measures in MET-hours/week, unless noted.

†Model 1: adjusted for age, race, gender, education, current occupation status, study site, current smoking, systolic blood pressure and current hypertension medication usage

‡Model 2 Moderate-Vigorous PA analysis adjusted for Model 1+ hours/day of leisure sedentary behavior

§Model 2 Leisure Sedentary Behavior analysis adjusted for Model 1 + MET-hours/week of moderate-vigorous PA

§ Moderate-Vigorous PA quartile ranges (MET-hours/week):

Quartile 1 (0.00-34.25), Quartile 2 (34.26-68.75), Quartile 3 (68.76-125.5), Quartile 4 (125.51-1722.0)

Supplementary Table S2. Baseline Characteristics of Participants by Incident Type 2 Diabetes Mellitus in the Multi-Ethnic Study of Atherosclerosis 2000-2012

Characteristic*	All participants n=5,829	No n=5,174	Yes n=655	p-value
Age	61.8 (10.3)	61.9 (10.4)	60.8 (9.5)	p=0.0074
Female	53.6%	53.8%	51.7%	p=0.298
Education \geq Bachelor's Degree	37.3%	38.0%	32.2%	p=0.097
Occupation, Full Time Employment	40.0%	40.0%	39.8%	p=0.176
Current Smoking	14.4%	14.5%	14.3%	p=0.93
Current Alcohol use	58.1%	58.6%	54.3%	p=0.11
Exercise Physical Activity (PA)	26.4 (39.4)	26.6 (39.3)	24.4 (40.1)	p=0.18
Moderate-Vigorous PA	97.2 (99.3)	97.0 (97.1)	98.5 (114.6)	p=0.7176
Any Vigorous PA	32.8%	33.4%	28.5%	p=0.012
Leisure Sedentary behavior (hours/day)	3.4 (2.2)	3.3 (2.2)	3.7 (2.3)	p=0.0004
TV watching (hours/day)	2.1 (1.5)	2.0 (1.5)	2.3 (1.6)	P<0.0001
Activity Score†	4.0 (1.6)	4.0 (1.6)	3.9 (1.6)	p=0.0162
Walking Pace‡				
Walking <2mph	25.8%	25.0%	32.2%	
Average Pace	50.6%	50.9%	48.1%	
Walking \geq 4mph	23.6%	24.1%	19.5%	P<0.0001
Body-mass Index (kilograms/meter ²)§	28.0 (5.3)	27.6 (5.1)	31.0 (5.8)	P<0.0001
Waist circumference (cm)	97.1 (14.1)	96.1 (13.8)	105.0 (14.1)	P<0.0001
Hypertension medication	33.3%	31.9%	44.4%	P<0.0001
SBP (mmHg)	125.6 (21.2)	125.0 (21.3)	130.2 (20.3)	P<0.0001
DBP (mmHg)	71.9 (10.3)	71.6 (10.2)	74.0 (10.7)	P<0.0001
Glucose (mg/dl)	89.6 (10.5)	88.1 (9.2)	101.1 (12.9)	P<0.0001
Impaired Fasting Glucose (100-125 mg/dL)	15.6%	10.9%	52.6%	P<0.0001
HOMA-IR	2.1 (1.4)	2.0 (1.2)	3.3 (1.9)	P<0.0001
Family History of Diabetes	34.4%	32.5%	48.6%	P<0.0001

*Mean (SD) or percentages are listed and physical activity in MET-hours/week, unless noted.

†Activity score was created by coding quartiles of moderate to vigorous physical activity 1 (lowest quartile) to 4 (highest quartile) and reverse coding leisure sedentary behavior 3 (lowest quartile) to 0 (highest quartile).

‡ n =5,823 participants

§The body-mass index was calculated as the weight in kilograms divided by the square of the height in meters.

|| = 5,350 participants

Supplementary Table S3. Association between Physical Activity (PA), Sedentary behaviors and Activity score and Incident Type 2 Diabetes Mellitus Stratified by Categories of Body-mass Index and American Heart Association (AHA) Dietary Status*

Activity Measures		Hazard Ratio by WHO categories† (95% CI)			Hazard Ratio by AHA Ideal Diet Status (‡) (95% CI)	
		BMI < 25	BMI ≥ 25 & < 30	BMI ≥ 30	Poor	Intermediate/ Ideal
		N=1,782	n= 2,329	n=1,712	n= 2,683	n= 2,657
Walking Pace (miles/hour)	none or casual (<2mph)	Ref.	Ref.	Ref.	Ref.	Ref.
	average (2-3mph)	0.72 (0.42, 1.25)	0.85 (0.63, 1.15)	0.83 (0.66, 1.05)	0.73 (0.57, 0.95)	0.81 (0.61, 1.08)
	brisk or striding (>4mph)	0.66 (0.34, 1.26)	0.92 (0.64, 1.32)	0.71 (0.51, 1.01)	0.58 (0.41, 0.83)	0.76 (0.54, 1.07)
	P for trend§	p=0.09	p=0.30	p<0.05	p=0.001	p=0.0134
Exercise PA (MET- hours/week)	Quartile 1	Ref.	Ref.	Ref.	Ref.	Ref.
	Quartile 2	0.67 (0.36, 1.24)	1.49 (1.04, 2.13)	0.93 (0.70, 1.23)	1.17 (0.87, 1.59)	0.91 (0.66, 1.25)
	Quartile 3	0.72 (0.39, 1.33)	1.02 (0.69, 1.51)	0.91 (0.68, 1.24)	0.92 (0.66, 1.28)	0.81 (0.59, 1.13)
	Quartile 4	0.68 (0.37, 1.26)	1.08 (0.73, 1.58)	0.79 (0.57, 1.09)	0.87 (0.62, 1.22)	0.66 (0.47, 0.93)
	P for trend	p=0.17	p=0.58	p=0.14	p=0.19	p=0.01
Moderate - Vigorous PA (MET- hours/week)	Quartile 1	Ref.	Ref.	Ref.	Ref.	Ref.
	Quartile 2	0.83 (0.46, 1.48)	0.63 (0.44, 0.90)	1.08 (0.79, 1.48)	0.70 (0.50, 0.99)	0.78 (0.58, 1.07)
	Quartile 3	0.69 (0.36, 1.33)	0.81 (0.58, 1.14)	0.80 (0.59, 1.10)	0.77 (0.56, 1.07)	0.70 (0.51, 0.97)
	Quartile 4	0.96 (0.52, 1.78)	0.70 (0.48, 1.00)	0.99 (0.73, 1.33)	0.95 (0.70, 1.29)	0.64 (0.46, 0.91)
	P for trend	p=0.44	p=0.06	p=0.74	p= 0.88	p=0.014
Vigorous PA	None	Ref.	Ref.	Ref.	Ref.	Ref.
	Any	1.02 (0.62, 1.67)	0.67 (0.50, 0.90)	0.87 (0.67, 1.13)	0.84 (0.64, 1.08)	0.71 (0.54, 0.94)
Leisure Sedentary Behavior (hours/day)	0-2 hours	Ref.	Ref.	Ref.	Ref.	Ref.
	2.01-4 hours	0.63 (0.37, 1.08)	1.52 (1.11, 2.10)	1.08 (0.81, 1.43)	1.09 (0.82, 1.46)	1.28 (0.96, 1.70)
	4.01-6 hours	0.83 (0.43, 1.61)	1.43 (0.97, 2.12)	1.43 (1.04, 1.98)	1.33 (0.94, 1.87)	1.55 (1.10, 2.17)
	>6 hours	1.45 (0.71, 2.96)	1.88 (1.19, 2.95)	1.31 (0.91, 1.88)	1.47 (0.99, 2.17)	1.50 (0.97, 2.30)

	P for trend	p=0.58	p<0.01	p=0.08	p<0.01	p<0.05
TV Watching (hours/day)	0-2 hours	Ref.	Ref.	Ref.	Ref.	Ref.
	2.01-4 hours	0.51 (0.27, 0.96)	1.22 (0.92, 1.63)	1.18 (0.93, 1.51)	1.00 (0.76, 1.30)	1.36 (1.05, 1.78)
	4.01-6 hours	1.60 (0.75, 3.45)	1.31 (0.84, 2.03)	1.33 (0.93, 1.89)	1.23 (0.84, 1.80)	1.40 (0.92, 2.14)
	>6 hours	N/A†	4.98 (1.8, 13.7)	1.74 (0.71, 4.24)	2.98 (1.22, 7.31)	2.67 (0.84, 8.45)
	P for trend	p=0.91	p<0.01	p<0.05	p<0.05	p<0.001
Activity Score §	Category 1	Ref.	Ref.	Ref.	Ref.	Ref.
	Category 2	0.25 (0.07, 0.82)	1.10 (0.64, 1.90)	0.76 (0.48, 1.22)	0.59 (0.35, 0.99)	0.87 (0.53, 1.41)
	Category 3	0.56 (0.23, 1.33)	0.85 (0.50, 1.45)	0.72 (0.47, 1.10)	0.66 (0.42, 1.05)	0.75 (0.48, 1.19)
	Category 4	0.72 (0.32, 1.62)	0.73 (0.44, 1.22)	0.77 (0.52, 1.14)	0.75 (0.49, 1.14)	0.64 (0.41, 1.00)
	Category 5	0.70 (0.29, 1.64)	0.81 (0.47, 1.40)	0.84 (0.55, 1.28)	0.74 (0.47, 1.17)	0.70 (0.44, 1.12)
	Category 6	0.55 (0.21, 1.43)	0.60 (0.33, 1.09)	0.51 (0.31, 0.83)	0.54 (0.33, 0.88)	0.41 (0.24, 0.71)
	Category 7	0.60 (0.19, 1.87)	0.59 (0.30, 1.17)	0.61 (0.35, 1.07)	0.69 (0.40, 1.20)	0.43 (0.23, 0.83)
	P for trend	p=0.84	p<0.01	p=0.35	p=0.21	p<0.01

*Model 1 Adjusted: adjusted for age, race, gender, education, current occupation status, study site, current smoking, systolic blood pressure and current hypertension medication usage, (lower/upper bounds) of 95% confidence intervals.

†The body-mass index was calculated as the weight in kilograms divided by the square of the height in meters.

‡ American Heart Association Diet for Ideal Cardiovascular Health

§ P for trend calculated using the Log-rank test.

|| Activity score was created by coding quartiles of moderate to vigorous physical activity 1 (lowest quartile) to 4 (highest quartile) and reverse coding leisure sedentary behavior 3 (lowest quartile) to 0 (highest quartile).

¶ N/A is used to denote a lack of participants in a specific category.

Exercise PA quartile ranges (MET-hours/week) overall and stratified by WHO categories of BMI:

BMI Overall: Quartile 1 (0.00-3.13), Quartile 2 (3.14-14.00), Quartile 3 (14.01-35.00), Quartile 4 (35.01-557.00)

BMI < 25: Quartile 1 (0.00-4.38), Quartile 2 (4.39-16.63), Quartile 3 (16.64-37.44), Quartile 4 (37.45-621)

BMI ≥ 25 & < 30: Quartile 1 (0.00-3.50), Quartile 2 (3.51-15.75), Quartile 3 (15.76-36.75), Quartile 4 (36.76-557.00)

BMI ≥ 30: Quartile 1 (0.00-0.00), Quartile 2 (0.00-10.50), Quartile 3 (10.51-27.98), Quartile 4 (27.99-405)

Moderate-Vigorous PA quartile ranges (MET-hours/week) overall and stratified by WHO categories of BMI:

BMI Overall: Quartile 1 (0.00-35.25), Quartile 2 (35.26-69.91), Quartile 3 (69.92-124.50), Quartile 4 (124.51-1722)

BMI < 25: Quartile 1 (0.00-33.75), Quartile 2 (33.76-63.69), Quartile 3 (63.70-117.94), Quartile 4 (117.95-795.00)

BMI ≥ 25 & < 30: Quartile 1 (0.00-36.75), Quartile 2 (36.76-71.94), Quartile 3 (71.95-130.25), Quartile 4 (130.26-1722.00)

BMI ≥ 30: Quartile 1 (0.00-31.69), Quartile 2 (31.70-70.06), Quartile 3 (70.7-127.56), Quartile 4 (127.57-1125.00)

Exercise PA quartile ranges (MET-hours/week) overall and stratified by AHA Diet Status:

AHA Diet Status Overall: Quartile 1 (0.00-2.75), Quartile 2 (2.76-14.00), Quartile 3 (14.01-34.88), Quartile 4 (34.89-621)

AHA Diet Status Poor: Quartile 1 (0.00-0.00), Quartile 2 (0.00-12.25), Quartile 3 (12.26-31.38), Quartile 4 (31.39-557)

AHA Diet Status Intermediate/Ideal: Quartile 1 (0.00-5.25), Quartile 2 (5.26-17.50), Quartile 3 (17.51-37.25), Quartile 4 (37.26-621.00)

Moderate-Vigorous PA quartile ranges (MET-hours/week) overall and stratified by AHA Diet Status

AHA Diet Status Overall: Quartile 1 (0.00-34.25), Quartile 2 (34.26-68.38), Quartile 3 (68.39-124.25), Quartile 4 (124.26-1722.00)

AHA Diet Status Poor: Quartile 1 (0.00-35.00), Quartile 2 (35.01-72.50), Quartile 3 (72.51-135.00), Quartile 4 (135.01-1722.00)

AHA Diet Status Intermediate/Ideal: Quartile 1 (0.00-33.50), Quartile 2 (33.51-64.00), Quartile 3 (64.01-116.25), Quartile 4 (116.26-942.50)

Supplementary Table S4: Likelihood Ratio Test for Interaction among Age, Gender, Race/Ethnicity, BMI, Family History of Diabetes and American Heart Association (AHA) Dietary Intake

Likelihood Ratio Test for Interaction Term						
P for interaction	Age	Gender	Race/Ethnicity	BMI	Family History of Diabetes	AHA Dietary Intake
Total leisure sedentary activity	0.0544	0.4893	0.0304	0.1291	0.0999	0.8476
Television viewing time	0.9366	0.6432	0.5828	0.0201	0.0498	0.3082
MVPA	0.9651	0.7400	0.8986	0.3944	0.5785	0.2048
Exercise PA	0.8490	0.1492	0.2286	0.9210	0.3915	0.2279
Any Vigorous PA	0.3037	0.2183	0.3623	0.0525	0.9022	0.6860
Activity Score	0.3728	0.9525	0.2428	0.2740	0.3694	0.1428

Supplementary Table S5: Diabetes Mellitus Rates per 1000 Person-years for Activity Score* by Race/Ethnicity

Race/Ethnicity	non-Hispanic white n= 2,425	Chinese American n= 691	African American n= 1,503	Hispanic American n= 1,210
Activity Score 1	17.4 (11.9, 25.6) †	18.9 (9.9, 36.4)	14.3 (9.0, 22.8)	17.5 (9.4, 32.6)
Activity Score 2	7.3 (4.7, 11.3)	11.6 (6.3, 21.6)	14.1 (9.4, 21.0)	21.8 (14.4, 33.2)
Activity Score 3	9.2 (6.8, 12.4)	9.1 (5.3, 15.6)	12.8 (9.0, 18.2)	17.1 (11.9, 24.6)
Activity Score 4	7.0 (5.2, 9.4)	10.1 (6.5, 15.9)	16.6 (13.0, 21.2)	16.2 (12.0, 21.7)
Activity Score 5	8.3 (6.1, 11.4)	16.8 (10.6, 26.6)	15.0 (10.6, 21.3)	14.7 (10.3, 20.8)
Activity Score 6	5.7 (3.6, 9.0)	8.3 (3.9, 17.3)	10.4 (6.6, 16.3)	11.3 (7.5, 17.0)
Activity Score 7	5.8 (3.1, 10.8)	9.6 (3.1, 29.7)	11.5 (6.4, 20.9)	12.6 (7.8, 20.2)

* Activity score was created by coding quartiles of moderate to vigorous physical activity 1 (lowest quartile) to 4 (highest quartile) and reverse coding leisure sedentary behavior 3 (lowest quartile) to 0 (highest quartile).

†Estimated rates per 1000 person-years and (lower/upper bounds) of 95% confidence intervals

Supplementary Table S6. Association between Physical Activity (PA), Sedentary Behavior and Activity Score and Incident Type 2 Diabetes Stratified by Family History of Diabetes.*

Physical Activity (PA)†		Family History of Diabetes (Model 1) n=5,289‡	
		Yes	No
		n= 1,840	n= 3,449
Walking Pace (miles/hour)	none or casual (<2 mph)	Ref.	Ref.
	average (2-4 mph)	0.81 (0.63, 1.05)	0.73 (0.56, 0.94)
	brisk or striding (>4mph)	0.73 (0.52, 1.01)	0.64 (0.46, 0.88)
	P for trend§	p<0.05	p<0.0001
Exercise PA	Quartile 1 (0.00-3.13)	Ref.	Ref.
	Quartile 2 (3.14-14.00)	1.07 (0.79, 1.46)	0.86 (0.64, 1.15)
	Quartile 3 (14.01-35.00)	1.11 (0.81, 1.51)	0.63 (0.45, 0.86)
	Quartile 4 (35.01-557.00)	0.74 (0.52, 1.06)	0.73 (0.53, 0.99)
	P for trend	p=0.06	p<0.01
Moderate - Vigorous PA	Quartile 1 (0.00-35.25)	Ref.	Ref.
	Quartile 2 (35.26-69.91)	1.12 (0.81, 1.54)	0.58 (0.42, 0.80)
	Quartile 3 (69.92-124.50)	1.01 (0.72, 1.40)	0.65 (0.48, 0.88)
	Quartile 4 (124.51-1722)	1.02 (0.74, 1.41)	0.74 (0.55, 1.00)
	P for trend	p=1.00	p=0.06
Vigorous PA	None	Ref.	Ref.
	Any	0.78 (0.60, 1.01)	0.77 (0.59, 1.00)
Leisure Sedentary behavior (hours/day)	0-2 hours	Ref.	Ref.
	2.01-4 hours	1.54 (1.15, 2.07)	0.93 (0.71, 1.23)
	4.01-6 hours	1.43 (1.00, 2.04)	1.32 (0.96, 1.82)
	>6 hours	1.96 (1.34, 2.87)	1.34 (0.91, 1.97)
	P for trend	p<0.01	p<0.01
TV Watching (hours/day)	0-2 hours	Ref.	Ref.
	2.01-4 hours	1.30 (1.01, 1.67)	0.99 (0.76, 1.28)
	4.01-6 hours	1.65 (1.16, 2.37)	1.30 (0.88, 1.92)
	>6 hours	1.72 (0.42, 6.99)	3.55 (1.66, 7.60)
	P for trend*	p<0.001	p<0.001
Activity Score	Category 1	Ref.	Ref.
	Category 2	1.07 (0.64, 1.81)	0.61 (0.38, 0.96)
	Category 3	1.13 (0.70, 1.83)	0.57 (0.37, 0.87)
	Category 4	1.13 (0.72, 1.78)	0.57 (0.38, 0.85)
	Category 5	1.07 (0.66, 1.72)	0.56 (0.36, 0.87)
	Category 6	0.58 (0.33, 1.02)	0.51 (0.32, 0.81)
	Category 7	0.78 (0.42, 1.45)	0.47 (0.27, 0.83)
	P for trend	p=0.09	p<0.01

Supplementary Table S6. Association between Physical Activity (PA), Sedentary Behavior and Activity Score and Incident Type 2 Diabetes Stratified by Family History of Diabetes.

*Model 1 Adjusted: adjusted for age, race, gender, education, current occupation status, study site, current smoking, systolic blood pressure and current hypertension medication usage, (lower/upper bounds) of 95% confidence intervals.

† Physical activity data in MET-hours/week, unless noted.

‡61 participants excluded from analysis due to unknown family history of diabetes.

§P for trend calculated using the Log-rank test.

|| Activity score was created by coding quartiles of moderate to vigorous physical activity 1 (lowest quartile) to 4 (highest quartile) and reverse coding leisure sedentary behavior 3 (lowest quartile) to 0 (highest quartile).

Exercise PA quartile ranges (MET-hours/week) overall and stratified by family history of diabetes:

Overall: Quartile 1 (0.00-3.13), Quartile 2 (3.14-14.00), Quartile 3 (14.01-35.00), Quartile 4 (35.01-557.00)

Family History of Diabetes: Quartile 1 (0.00-2.50), Quartile 2 (2.51-14.00), Quartile 3 (14.01-32.38), Quartile 4 (32.39-557.00)

No Family History of Diabetes: Quartile 1 (0.00-3.50), Quartile 2 (3.51-14.00), Quartile 3 (14.01-35.25), Quartile 4 (35.26-513.63)

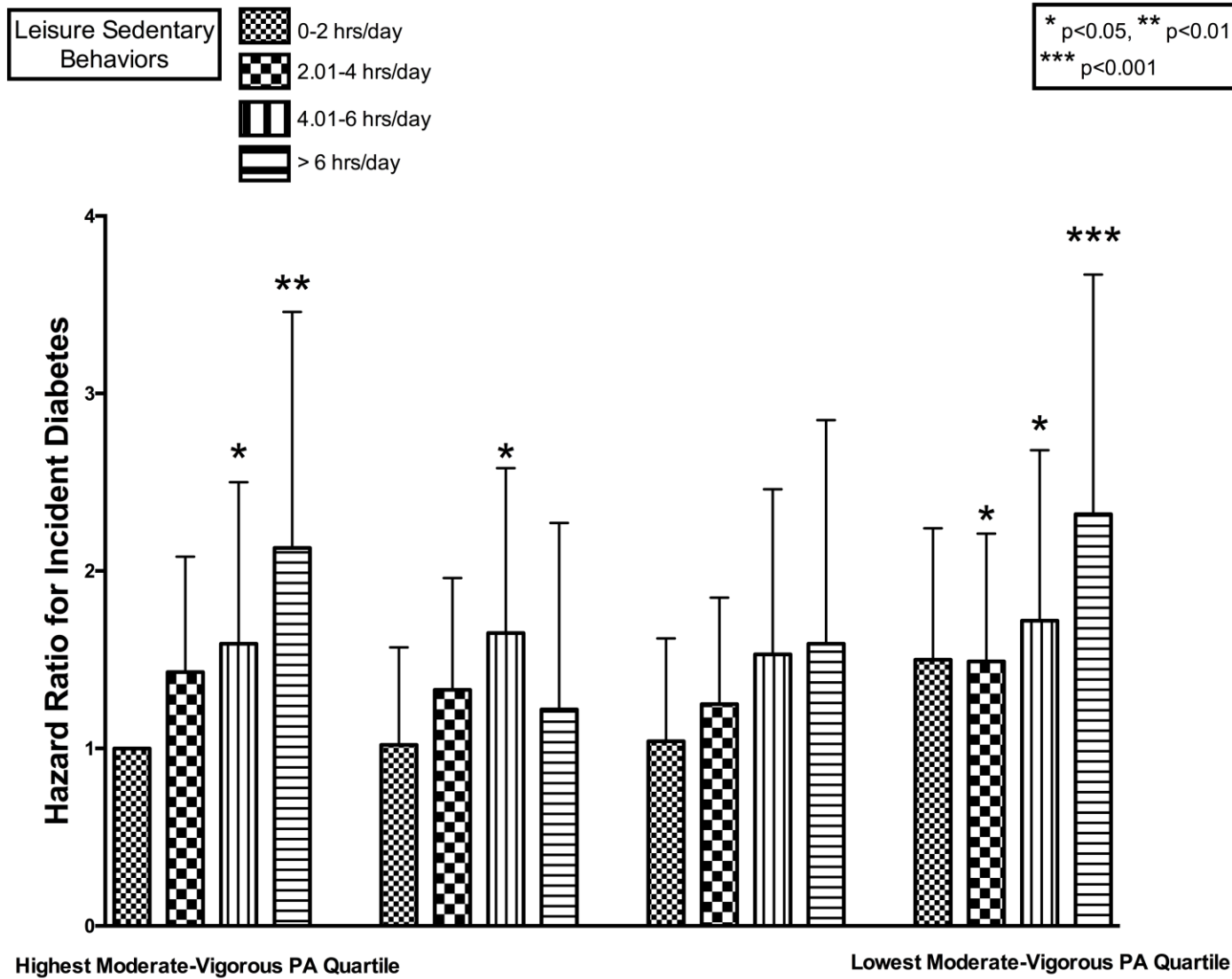
Moderate-Vigorous PA quartile ranges (MET-hours/week) overall and stratified by family history of diabetes:

Overall: Quartile 1 (0.00-35.25), Quartile 2 (35.26-69.91), Quartile 3 (69.92-124.50), Quartile 4 (124.51-1722)

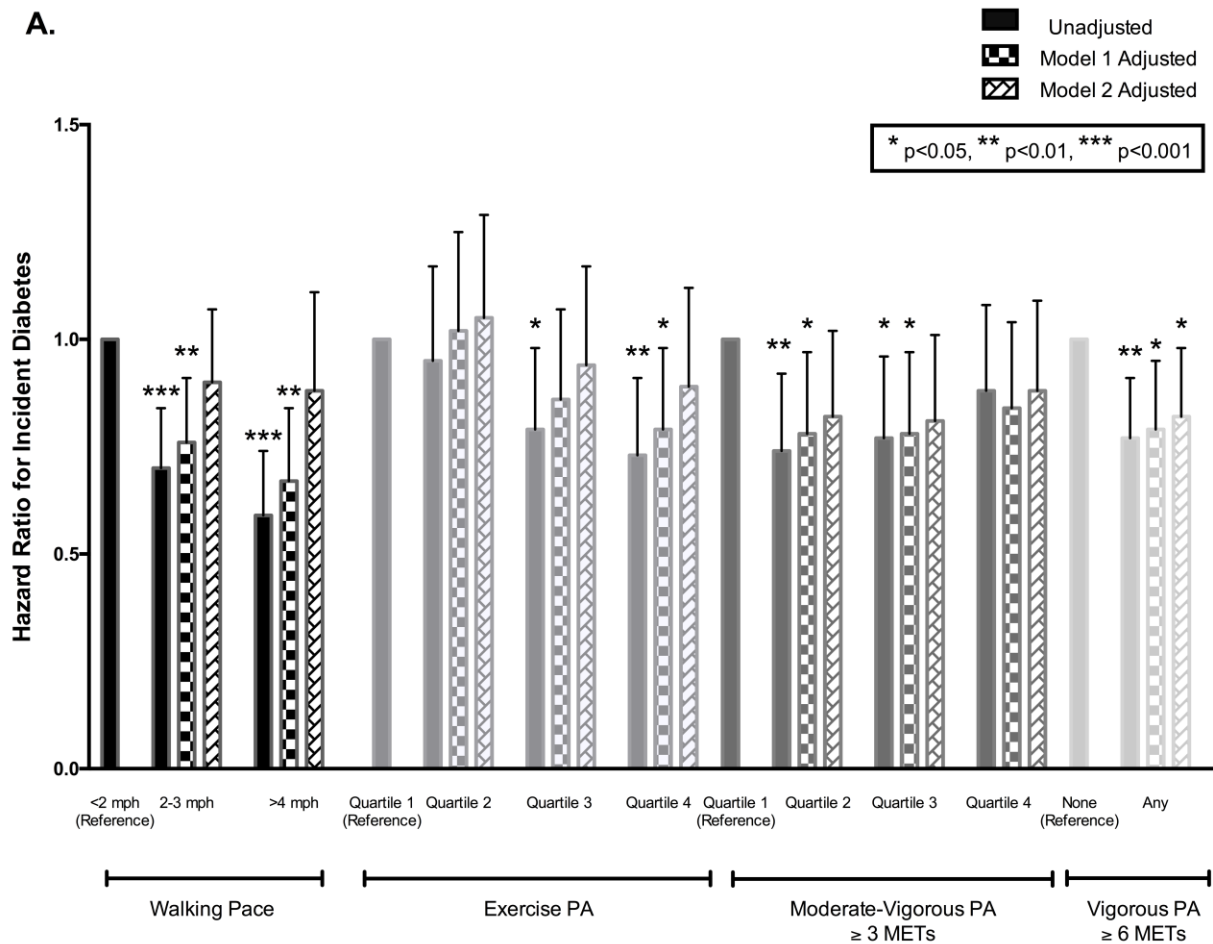
Family History of Diabetes: Quartile 1 (0-36.00), Quartile 2 (36.01-72.00), Quartile 3 (72.01-130.38), Quartile 4 (130.39-1722.00)

No Family History of Diabetes: Quartile 1 (0.00-35.00), Quartile 2 (35.01-68.88), Quartile 3 (68.89-121.50), Quartile 4 (121.51-942.50)

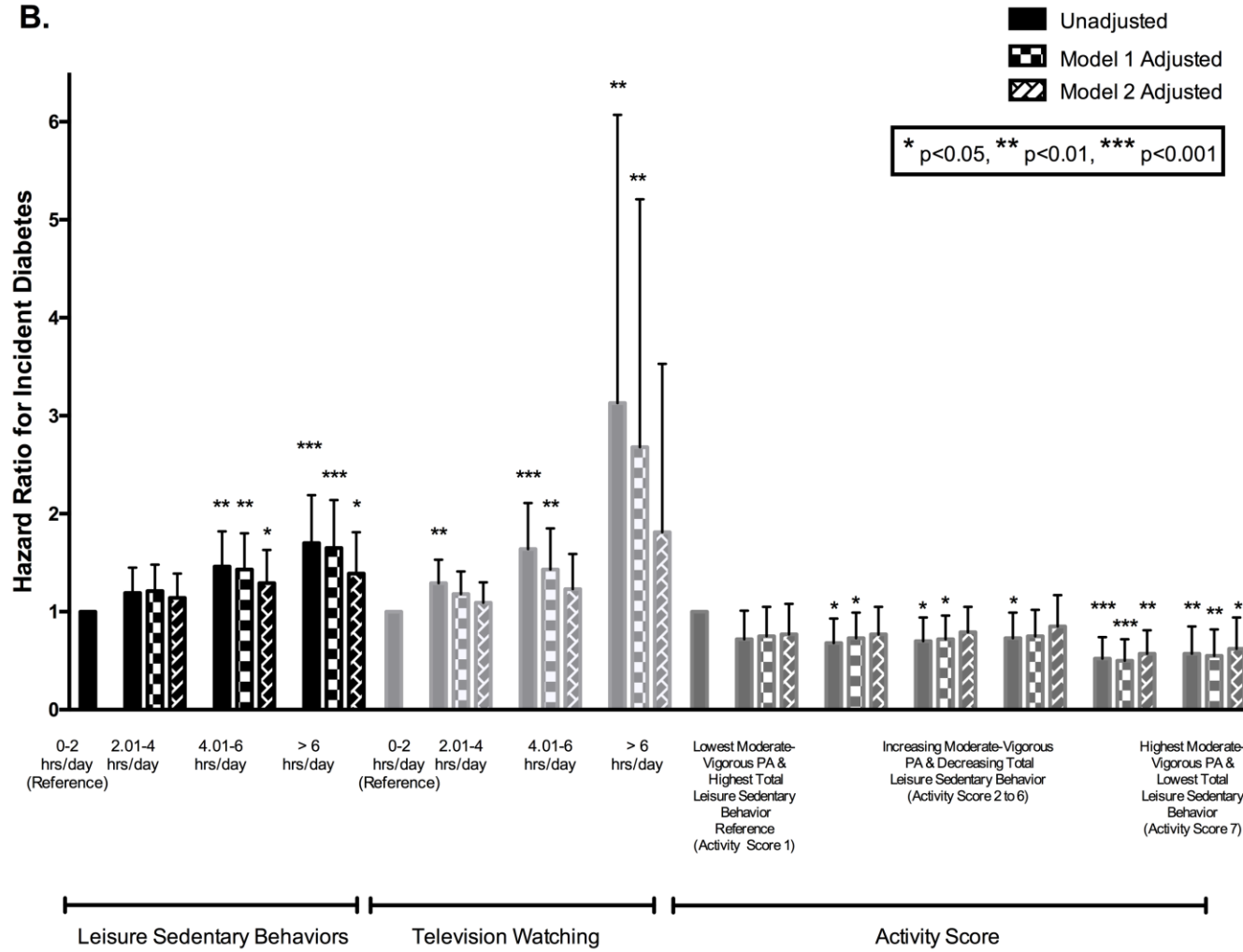
Supplementary Figure S1. Moderate-Vigorous Physical Activity (PA) (MET-hours/week) versus Total Leisure Sedentary Behavior (hours/day) and Incident Type 2 Diabetes Mellitus from 2000-2012. Data are included for 5,829 participants followed for a median of 11.1 years. Using Cox proportional hazards modeling, we calculated the hazard ratios using the highest moderate-vigorous PA, lowest sedentary behavior category as the referent group. The model included the moderate-vigorous PA-sedentary behavior category, study site, age, race, sex, education, current occupation status, systolic blood pressure, antihypertensive medication use, and smoking. * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$ versus the referent category.



Supplementary Figure S2. The Association between (A) Physical Activity (PA) and (B) Sedentary Behaviors and Incident Type 2 Diabetes (2000-2012). Data are included for 5,829 participants followed for a median of 11.1 years. Using Cox proportional hazards modeling, we calculated the hazard ratios associated within categories of activity. Sequential modeling was conducted with Model 1 including the activity variable of interest, study site, age, race, sex, education, current occupation status, systolic blood pressure, antihypertensive medication use, and smoking. Model 2 included model 1 variables plus BMI. Activity score was created by coding quartiles of moderate to vigorous physical activity 1 (lowest quartile) to 4 (highest quartile) and reverse coding leisure sedentary behavior 3 (lowest quartile) to 0 (highest quartile). * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$ versus the referent category in each domain of physical activity, sedentary behavior and activity score.



B.



Supplementary Figure S3. Activity Score and Incident Type 2 Diabetes Mellitus by race/ethnicity from 2000-2012. Data are included for 5,829 participants followed for a median of 11.1 years. Using Cox proportional hazards modeling, we calculated the hazard ratios associated with increasing PA score using a PA score of 1 (low moderate-vigorous PA, high total leisure sedentary behavior) as the referent category in each race/ethnicity. The model included the PA score, study site, age, sex, education, current occupation status, systolic blood pressure, antihypertensive medication use, and smoking. * $p < 0.05$, ** $p < 0.01$ and *** $p < 0.001$ versus the referent category. P for trend was calculated using the log-rank test. § Activity score was created by coding quartiles of moderate to vigorous physical activity 1 (lowest quartile) to 4 (highest quartile) and reverse coding leisure sedentary behavior 3 (lowest quartile) to 0 (highest quartile). Incident Rates for Activity score provided in Supplementary Table S5.

