

# Occupational and leisure-time physical activity differentially predict 6-year incidence of stroke and transient ischemic attack in women <sup>1</sup>

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1. Supplementary tables 1-5
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**Supplementary Table S1.** Characteristics of the study population, stratified by baseline cardiovascular disease (CVD) status. Sister Study, 2004-2015, N=31270.<sup>a</sup>

Characteristic	Without CVD (N=25019)		With CVD <sup>b</sup> (N=6251)	
Age	52.7	±7.6	54.5	±7.6
Race/ethnicity				
Non-Hispanic White	20581	82.3%	5166	82.6%
Non-Hispanic Black	2541	10.2%	679	10.9%
Hispanic	1212	4.8%	262	4.2%
Other	676	2.7%	143	2.3%
Missing	9	0.0%	1	0.0%
Occupational physical activity, current job				
Mostly sitting	13663	54.6%	3472	54.8%
Sitting and standing equally	5356	21.4%	1322	21.2%
Mostly standing	3915	15.7%	972	15.6%
Continuous walking/movements <sup>c</sup>	1862	7.4%	480	7.7%
Heavy manual labor <sup>d</sup>	218	0.9%	49	0.8%
Sporadic heavy manual labor	5	0.0%	1	0.0%
Occupational physical activity, longest held job				
Mostly sitting	12187	48.7%	2975	47.6%
Sitting and standing equally	5471	21.9%	1410	22.6%
Mostly standing	4631	18.5%	1179	18.9%
Continuous walking/movements <sup>c</sup>	2369	9.5%	614	9.8%
Heavy manual labor <sup>d</sup>	352	1.4%	73	1.2%
Sporadic heavy manual labor	4	0.0%	0	0.0%
Leisure time physical activity				
None	4331	17.3%	1110	17.8%
All activity <3 METs	869	3.5%	267	4.3%

Insufficient activity time to meet requirements	14775	59.1%	3652	58.4%
3-<6 METs for 150+ minutes/week	1243	5.0%	318	5.1%
6+ METs for 75+ minutes/week	3801	15.2%	904	14.5%
Alcohol consumption				
Never drinker	755	3.0%	207	3.3%
Former drinker	3327	13.3%	909	14.5%
<1-3 drinks/day	20749	82.9%	5087	81.4%
>3 drinks/day	154	0.6%	37	0.6%
Missing	34	0.1%	11	0.2%
Smoking Status				
Never smoker	14543	58.1%	3559	56.9%
Former smoker	8319	33.3%	2189	35.0%
Current smoker	2146	8.6%	501	8.0%
Missing	11	0.1%	2	0.0%
Body mass index (kg/m <sup>2</sup> )				
<18.5	235	0.9%	88	1.4%
18.5-24.9	9359	37.4%	2367	37.9%
25.0-29.9	7802	31.2%	1941	31.1%
30.0-34.9	4342	17.4%	1044	16.7%
35.0-39.9	2019	8.1%	499	8.0%
≥40.0	1253	5.0%	312	5.0%
Missing	9	0.0%	0	0.0%
Ever face discrimination at work				
Yes	5596	22.4%	1661	26.6%
No	16642	66.5%	3950	63.2%
Missing	2781	11.1%	640	10.2%
Ever work night shifts				
Yes	7545	30.2%	2082	33.3%
No	17474	69.8%	4169	66.7%
Resting heart rate	69.1	±8.2	68.6	±8.1
Systolic blood pressure	113.9	±13.3	114.9	±13.4
Diastolic blood pressure	72.6	±8.8	72.6	±8.8
Pulse pressure	41.3	±9.1	42.3	±9.4
Rate pressure product <sup>e</sup>	2858.1	±731.2	2908.1	±754.1

<sup>a</sup>Data presented as number percentage% and mean ± standard deviation where appropriate.

<sup>b</sup>CVD defined as self-reported doctor's diagnosis of congestive heart failure, mitral valve prolapse, arrhythmia, stroke, TIA, angina, or myocardial infarction at baseline.

<sup>c</sup>Self-reported OPA as “continuous walking or other movements that increase your heart rate slightly”

<sup>d</sup>Self-reported OPA as “heavy manual labor that causes sweating or increases your heart substantially”

<sup>e</sup>Rate pressure product defined as the product of pulse pressure and resting heart rate.

**Supplementary Table S2.** Occupational physical activity and incident cerebrovascular disease (stroke or TIA, n=567): Hazard ratios and 95% confidence intervals from Cox regression analyses with incremental adjustment for potential confounders. Sister Study, 2004-2015, N=31270.

Occupational physical activity	Case N/ Exposed N	Model 1 <sup>a</sup>		Model 2 <sup>b</sup>		Model 3 <sup>c</sup>		Model 4 <sup>d</sup>	
		HR	95% CI	HR	95% CI	HR	95% CI	HR	95% CI
<i>Current job</i>									
Mostly sitting	277/16394	1.00	-	1.00	-	1.00	-	1.00	-
Sitting and standing equally	130/6430	1.15	0.94-1.42	1.18	0.96-1.45	1.18	0.96-1.46	1.17	0.95-1.45
Mostly standing	94/4698	1.15	0.91-1.45	1.13	0.90-1.43	1.16	0.92-1.47	1.16	0.92-1.47
High intensity work	55/2493	1.32	0.99-1.77	1.16	0.86-1.55	1.14	0.85-1.54	1.14	0.85-1.53
Continuous walking/movements	49/2240	1.31	0.97-1.78	1.15	0.85-1.57	1.14	0.84-1.56	1.14	0.84-1.56
Heavy manual labor	6/253	1.43	0.64-3.21	1.18	0.53-2.67	1.16	0.51-2.60	1.13	0.50-2.55
<i>Longest held job</i>									
Mostly sitting	262/14537	1.00	-	1.00	-	1.00	-	1.00	-
Sitting and standing equally	113/6630	0.90	0.72-1.12	0.92	0.74-1.15	0.92	0.74-1.15	0.91	0.73-1.14
Mostly standing	103/5595	1.00	0.80-1.26	0.97	0.78-1.22	0.98	0.78-1.24	0.98	0.78-1.23
High intensity work	78/3253	1.41	1.09-1.81	1.30	1.01-1.67	1.28	0.99-1.66	1.27	0.98-1.65
Continuous walking/movements	73/2845	1.47	1.13-1.91	1.37	1.05-1.78	1.35	1.04-1.77	1.35	1.03-1.76
Heavy manual labor	6/408	0.91	0.41-2.05	0.79	0.35-1.77	0.78	0.35-1.76	0.77	0.34-1.73

<sup>a</sup>Model 1 adjusts for age

<sup>b</sup>Model 2 adjusts for age, leisure time physical activity, alcohol, smoking, and body mass index

<sup>c</sup>Model 3 adjusts for age, leisure time physical activity, alcohol, smoking, body mass index, discrimination at work, and night work

<sup>d</sup>Model 4 adjusts for age, leisure time physical activity, alcohol, smoking, body mass index, discrimination at work, night work, and rate pressure product

**Supplementary Table S3.** Occupational physical activity and incident TIA (n=274) by cardiovascular disease (CVD): Hazard ratios and 95% confidence intervals from fully-adjusted Cox regression models. Sister Study, 2004-2015, N=31270.

Occupational physical activity	Cardiovascular disease status at baseline					
	Without CVD (n=24913)			With CVD <sup>a</sup> (n=5846)		
	Case N/ Exposed N	HR <sup>b</sup>	95% CI	Case N/ Exposed N	HR <sup>b</sup>	95% CI
<i>Current job</i>						
Mostly sitting	93/13032	1.00	-	29/3087	1.00	-
Sitting and standing equally	40/5141	1.09	0.75-1.58	24/1197	1.98	1.10-3.55
Mostly standing	41/3747	1.46	1.01-2.11	9/865	1.36	0.62-2.97
High intensity work	23/1975	1.52	0.95-2.42	8/478	1.33	0.54-3.25
<i>Longest held job</i>						
Mostly sitting	100/11618	1.00	-	27/2697	1.00	-
Sitting and standing equally	31/5261	0.68	0.46-1.03	17/1264	1.44	0.76-2.74
Mostly standing	39/4433	1.02	0.70-1.48	15/1052	1.29	0.64-2.63
High intensity work	27/2583	1.11	0.72-1.73	11/614	1.75	0.82-3.78

<sup>a</sup>CVD defined by self-reported doctor's diagnosis of congestive heart failure, mitral valve prolapse, arrhythmia, stroke, angina, or myocardial infarction at baseline.

<sup>b</sup>Models adjust for age, leisure time physical activity, alcohol, smoking, body mass index, discrimination at work, night work, and rate pressure product.

**Supplementary Table S4.** Cross-tabulation of occupational physical activity level (frequency, row and column percent) in current and longest held jobs, Sister Study, 2004-2015, N=31270.

Longest held job		Current job					
		Mostly sitting	Sitting and standing equally	Mostly standing	Continuous walking/movements*	Heavy manual labor*	Total
Mostly sitting	<b>Frequency</b>	<b>13077</b>	<b>1053</b>	<b>698</b>	<b>294</b>	<b>40</b>	<b>15162</b>
	Row %	86.3%	6.9%	4.6%	1.9%	0.3%	100.0%
	Column %	76.5%	15.8%	14.3%	12.6%	14.7%	48.5%
Sitting and standing equally	<b>Frequency</b>	<b>1857</b>	<b>4302</b>	<b>448</b>	<b>244</b>	<b>30</b>	<b>6881</b>
	Row %	27.0%	62.5%	6.5%	3.6%	0.4%	100.0%
	Column %	10.9%	64.4%	9.2%	10.4%	11.0%	22.0%
Mostly standing	<b>Frequency</b>	<b>1316</b>	<b>835</b>	<b>3354</b>	<b>269</b>	<b>36</b>	<b>5810</b>
	Row %	22.7%	14.4%	57.7%	4.6%	0.6%	100.0%
	Column %	7.7%	12.5%	68.6%	11.5%	13.2%	18.6%
Continuous walking/movements*	<b>Frequency</b>	<b>730</b>	<b>420</b>	<b>334</b>	<b>1468</b>	<b>31</b>	<b>2983</b>
	Row %	24.5%	14.1%	11.2%	49.2%	1.0%	100.0%
	Column %	4.3%	6.3%	6.8%	62.7%	11.4%	9.5%
Heavy manual labor*	<b>Frequency</b>	<b>110</b>	<b>68</b>	<b>53</b>	<b>67</b>	<b>136</b>	<b>434</b>
	Row %	25.4%	15.7%	12.2%	15.4%	31.3%	100.0%
	Column %	0.6%	1.0%	1.1%	2.7%	49.8%	1.4%
Total	<b>Frequency</b>	<b>17090</b>	<b>6678</b>	<b>4887</b>	<b>2342</b>	<b>273</b>	31270
	Row %	54.7%	21.4%	15.6%	7.5%	0.9%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

\*These categories comprise the "high intensity work" exposure category.

**Supplementary Table 5.** Cross-tabulation of occupational physical activity level (frequency, row and column percent) in current and longest held jobs among those with cardiovascular disease at baseline, Sister Study, 2004-2015, N=6251.

Longest held job		Current job					
		Mostly sitting	Sitting and standing equally	Mostly standing	Continuous walking/movements*	Heavy manual labor*	Total
Mostly sitting	<b>Frequency</b>	<b>2575</b>	<b>213</b>	<b>133</b>	<b>49</b>	<b>5</b>	<b>2975</b>
	Row %	86.6%	7.2%	4.5%	1.7%	0.2%	100.0%
	Column %	75.1%	16.1%	13.7%	10.2%	10.0%	47.6%
Sitting and standing equally	<b>Frequency</b>	<b>410</b>	<b>852</b>	<b>85</b>	<b>60</b>	<b>3</b>	<b>1410</b>
	Row %	29.1%	60.4%	6.0%	4.3%	0.2%	100.0%
	Column %	12.0%	64.5%	8.7%	12.5%	6.0%	22.6%
Mostly standing	<b>Frequency</b>	<b>275</b>	<b>166</b>	<b>670</b>	<b>54</b>	<b>14</b>	<b>1179</b>
	Row %	23.3%	14.1%	56.8%	4.6%	1.2%	100.0%
	Column %	8.0%	12.6%	68.9%	11.3%	28.0%	18.9%
Continuous walking/movements*	<b>Frequency</b>	<b>149</b>	<b>82</b>	<b>72</b>	<b>305</b>	<b>6</b>	<b>614</b>
	Row %	24.3%	13.4%	11.7%	49.7%	1.0%	100.0%
	Column %	4.4%	6.2%	7.4%	63.5%	12.0%	9.8%
Heavy manual labor*	<b>Frequency</b>	<b>18</b>	<b>9</b>	<b>12</b>	<b>12</b>	<b>22</b>	<b>73</b>
	Row %	24.7%	12.3%	16.4%	16.4%	30.1%	100.0%
	Column %	0.5%	0.7%	1.2%	2.5%	44.0%	1.2%
Total	<b>Frequency</b>	<b>3427</b>	<b>1322</b>	<b>972</b>	<b>480</b>	<b>50</b>	6251
	Row %	54.8%	21.2%	15.6%	7.7%	0.8%	100.0%
	Column %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

\*These categories comprise the "high intensity work" exposure category.