Supplementary Tables (n=5)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table 1.** Characteristics of the study population, stratified by baseline cardiovascular disease (CVD) status. Sister Study, 2004-2015, N=31270.a | | | | | | | | | |
| Characteristic | |  | | Without CVD (N=25019) | | |  | With CVDb (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/movementsc |  | | 1862 | | 7.4% |  | 480 | 7.7% |
|  | Heavy manual labord |  | | 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/movementsc |  | | 2369 | | 9.5% |  | 614 | 9.8% |
|  | Heavy manual labord |  | | 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/m2) | | |  | |  |  |  |  |  |
|  | <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 producte | | |  | | 2858.1 | ±731.2 |  | 2908.1 | ±754.1 |
| aData presented as number percentage% and mean ± standard deviation where appropriate. | | | | | | | | | |
| bCVD defined as self-reported doctor's diagnosis of congestive heart failure, mitral valve prolapse, arrhythmia, stroke, TIA, angina, or myocardial infarction at baseline.  cSelf-reported OPA as “continuous walking or other movements that increase your heart rate slightly”  dSelf-reported OPA as “heavy manual labor that causes sweating or increases your heart substantially” | | | | | | | | | |
| eRate pressure product defined as the product of pulse pressure and resting heart rate. | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table 2.** 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 1a | | |  | Model 2b | | |  | Model 3c | | |  | Model 4d | | |
|  |  | HR |  | 95% CI |  | HR |  | 95% CI |  | HR |  | 95% CI |  | HR |  | 95% CI |
| *Current job* | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 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 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Longest held job* | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 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 |
| aModel 1 adjusts for age | | | | | | | | | | | | | | | | |  |  |  |  |
| bModel 2 adjusts for age, leisure time physical activity, alcohol, smoking, and body mass index | | | | | | | | | | | | | | | | |  |  |  |  |
| cModel 3 adjusts for age, leisure time physical activity, alcohol, smoking, body mass index, discrimination at work, and night work | | | | | | | | | | | | | | | | | | | | |
| dModel 4 adjusts for age, leisure time physical activity, alcohol, smoking, body mass index, discrimination at work, night work, and rate pressure product | | | | | | | | | | | | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table 3.** 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. | | | | | | | | | | | | | | |
|  |  |  |  | Cardiovascular disease status at baseline | | | | | | | | | | |
|  |  |  |  | Without CVD (n=24913) | | | | |  | With CVDa (n=5846) | | | | |
| Occupational physical activity | | |  | Case N/ Exposed N |  | HRb |  | 95% CI |  | Case N/ Exposed N |  | HRb |  | 95% CI |
| *Current job* | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 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 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| *Longest held job* | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 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 |
| aCVD defined by self-reported doctor’s diagnosis of congestive heart failure, mitral valve prolapse, arrhythmia, stroke, angina, or myocardial infarction at baseline. | | | | | | | | | | | | | | |
| bModels adjust for age, leisure time physical activity, alcohol, smoking, body mass index, discrimination at work, night work, and rate pressure product. | | | | | | | | | | | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplementary Table 4.** Cross-tabulation of occupational physical activity level (frequency, row and column percent) in current and longest held jobs, Sister Study, 2004-2015, N=31270. | | | | | | | |
|  |  | Current job | | | | |  |
| Longest held job |  | Mostly sitting | Sitting and standing equally | Mostly standing | Continuous walking/ movements\* | Heavy manual labor\* | Total |
| Mostly sitting | **Frequency** | **13077** | **1053** | **698** | **294** | **40** | **15162** |
| 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 | **Frequency** | **1857** | **4302** | **448** | **244** | **30** | **6881** |
| 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 | **Frequency** | **1316** | **835** | **3354** | **269** | **36** | **5810** |
| 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\* | **Frequency** | **730** | **420** | **334** | **1468** | **31** | **2983** |
| 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\* | **Frequency** | **110** | **68** | **53** | **67** | **136** | **434** |
| 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 | **Frequency** | **17090** | **6678** | **4887** | **2342** | **273** | 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. | | | | | | | |
|  |  | Current job | | | | |  |
| Longest held job |  | Mostly sitting | Sitting and standing equally | Mostly standing | Continuous walking/ movements\* | Heavy manual labor\* | Total |
| Mostly sitting | **Frequency** | **2575** | **213** | **133** | **49** | **5** | **2975** |
| 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 | **Frequency** | **410** | **852** | **85** | **60** | **3** | **1410** |
| 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 | **Frequency** | **275** | **166** | **670** | **54** | **14** | **1179** |
| 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\* | **Frequency** | **149** | **82** | **72** | **305** | **6** | **614** |
| 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\* | **Frequency** | **18** | **9** | **12** | **12** | **22** | **73** |
| 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 | **Frequency** | **3427** | **1322** | **972** | **480** | **50** | 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. | | | | | | | |