SUPPLEMENTAL MATERIAL

Table S1. Complete case analysis for associations of daily life movement (DLM) quartiles with incident major CVD, CHD, stroke, and CVD death in the Objectively Measured Physical Activity and Cardiovascular Health (OPACH) Cohort 2012-2020.

| | | Quartiles of total daily li | fe movement (DLM) h | ours/day | |
|-----------------------------|------------|-----------------------------|---------------------|------------------|---------|
| | Q1 | Q2 | Q3 | Q4 | |
| | <2.19 | 2.19-3.09 | 3.09-4.11 | ≥4.11 | p-trend |
| | | М | ajor CVD | | |
| Events (rate [*]) | 240 (32.3) | 147 (18.2) | 132 (16) | 97 (11.4) | |
| Model 1 ^{†, ‡} | 1 (ref) | 0.63 (0.51-0.77) | 0.61 (0.49-0.76) | 0.48 (0.38-0.61) | < 0.001 |
| Model 2A ^{§, ‡} | 1 (ref) | 0.70 (0.56-0.86) | 0.70 (0.56-0.88) | 0.59 (0.46-0.76) | < 0.001 |
| Model 2B ^{¶,‡} | 1 (ref) | 0.73 (0.59-0.90) | 0.72 (0.57-0.91) | 0.62 (0.48-0.80) | < 0.001 |
| Model 3A ^{#, ‡} | 1 (ref) | 0.69 (0.54-0.87) | 0.73 (0.57-0.94) | 0.63 (0.47-0.83) | 0.001 |
| Model 3B ^{, ‡} | 1 (ref) | 0.72 (0.57-0.92) | 0.75 (0.58-0.96) | 0.65 (0.49-0.87) | 0.003 |
| | | | CHD | | |
| Events (rate [*]) | 108 (14.3) | 59 (7.2) | 62 (7.4) | 39 (4.5) | |
| Model 1 ^{†, ‡} | 1 (ref) | 0.56 (0.41-0.77) | 0.63 (0.46-0.87) | 0.43 (0.30-0.62) | < 0.001 |
| Model 2A ^{§, ‡} | 1 (ref) | 0.63 (0.46-0.87) | 0.78 (0.56-1.09) | 0.57 (0.39-0.85) | 0.003 |
| Model 2B ^{¶,‡} | 1 (ref) | 0.64 (0.46-0.90) | 0.79 (0.56-1.10) | 0.61 (0.41-0.90) | 0.01 |
| Model 3A ^{#, ‡} | 1 (ref) | 0.57 (0.40-0.81) | 0.69 (0.48-1.00) | 0.56 (0.36-0.86) | 0.003 |
| Model 3B ^{∥,‡} | 1 (ref) | 0.58 (0.40-0.84) | 0.69 (0.47-1.01) | 0.58 (0.37-0.90) | 0.01 |
| | | | Stroke | | |
| Events (rate [*]) | 77 (10.2) | 71 (8.7) | 58 (6.9) | 47 (5.5) | |
| Model 1 ^{†, ‡} | 1 (ref) | 0.93 (0.68-1.29) | 0.81 (0.58-1.15) | 0.70 (0.48-1.02) | 0.02 |
| Model 2A ^{§, ‡} | 1 (ref) | 0.98 (0.70-1.36) | 0.83 (0.58-1.19) | 0.72 (0.49-1.06) | 0.03 |
| Model 2B ^{¶,‡} | 1 (ref) | 1.05 (0.75-1.47) | 0.87 (0.60-1.25) | 0.74 (0.50-1.10) | 0.03 |
| Model 3A ^{#, ‡} | 1 (ref) | 1.00 (0.69-1.45) | 0.90 (0.60-1.33) | 0.74 (0.48-1.15) | 0.15 |
| Model 3B ^{,‡} | 1 (ref) | 1.07 (0.73-1.56) | 0.93 (0.62-1.40) | 0.76 (0.48-1.19) | 0.16 |
| | | C | VD Death | | |
| Events (rate [*]) | 164 (21.3) | 67 (8) | 62 (7.3) | 38 (4.4) | |
| Model 1 ^{†, ‡} | 1 (ref) | 0.43 (0.32-0.57) | 0.46 (0.34-0.61) | 0.31 (0.22-0.44) | < 0.001 |
| Model 2A ^{§,‡} | 1 (ref) | 0.48 (0.36-0.64) | 0.55 (0.41-0.75) | 0.39 (0.27-0.57) | < 0.001 |
| Model 2B ^{¶,‡} | 1 (ref) | 0.52 (0.39-0.70) | 0.58 (0.42-0.79) | 0.42 (0.29-0.61) | < 0.001 |
| Model 3A ^{#, ‡} | 1 (ref) | 0.48 (0.35-0.66) | 0.59 (0.42-0.83) | 0.42 (0.28-0.63) | < 0.001 |
| Model 3B ^{, ‡} | 1 (ref) | 0.53 (0.38-0.73) | 0.63 (0.45-0.89) | 0.45 (0.29-0.68) | < 0.001 |

Abbreviations: CVD = cardiovascular disease; CHD = coronary heart disease

Major CVD represents the composite of the first reported fatal or non-fatal CHD, fatal or non-fatal stroke, or death attributable to any CVD. The first reported fatal or non-fatal CHD, fatal or non-fatal stroke, and death attributable to any CVD were examined as separate endpoints.

* Event rate per 1000 person-years

⁺ Model 1 adjusted for age and race/ethnicity (n=5416), for which there was no missing data.

^{*} Data are hazard ratio (95% CI)

[§] Model 2A adjusted for model 1 covariates plus education, alcohol intake, smoking status, multimorbidity, selfrated health, and RAND-36 physical function score (n=5325).

[¶] Model 2B adjusted for model 2A covariates plus assistive device use (n=5182)

[#] Model 3A adjusted for model 2 covariates plus BMI, systolic blood pressure, total cholesterol, HDL, and hs-CRP (n=4221).

^{||} Model 3B adjusted for model 3A covariates plus assistive device use (n=4107)

Table S2. Sensitivity analysis for associations of daily life movement (DLM) quartiles with incident major CVD, CHD, stroke, and CVD death in the Objectively Measured Physical Activity and Cardiovascular Health (OPACH) Cohort 2012-2020 after excluding data from 163 women who had major CVD events within the first 2 years of follow-up.

| | Ç | Quartiles of total daily li | fe movement (DLM) h | ours/day | |
|---------------------------------|------------|-----------------------------|---------------------|------------------|---------|
| | Q1 | Q2 | Q3 | Q4 | |
| | <2.19 | 2.19-3.09 | 3.09-4.11 | ≥4.11 | p-trend |
| | | М | ajor CVD | | |
| Events (rate [*]) | 164 [22.3] | 113 [14] | 98 [11.9] | 78 [9.2] | |
| Model 1 ^{†, ‡, §} | 1 (ref) | 0.68 (0.54-0.87) | 0.63 (0.49-0.82) | 0.54 (0.41-0.71) | < 0.001 |
| Model 2 ^{¶, ‡, §} | 1 (ref) | 0.75 (0.58-0.95) | 0.73 (0.56-0.95) | 0.65 (0.49-0.87) | 0.001 |
| Model 3A ^{#, ‡, §} | 1 (ref) | 0.76 (0.58-0.99) | 0.77 (0.58-1.03) | 0.71 (0.52-0.99) | 0.03 |
| Model 3B ^{#, ‡, §,} | 1 (ref) | 0.75 (0.59-0.96) | 0.74 (0.57-0.97) | 0.68 (0.50-0.92) | 0.003 |
| | | | CHD | | |
| Events (rate [*]) | 69 [9.3] | 41 [5] | 47 [5.7] | 28 [3.3] | |
| Model 1 ^{†, ‡, §} | 1 (ref) | 0.58 (0.39-0.85) | 0.71 (0.48-1.03) | 0.44 (0.28-0.69) | < 0.001 |
| Model 2 ^{¶, ‡, §} | 1 (ref) | 0.65 (0.43-0.96) | 0.88 (0.60-1.30) | 0.59 (0.37-0.95) | 0.02 |
| Model 3A ^{#, ‡, §} | 1 (ref) | 0.55 (0.35-0.86) | 0.78 (0.51-1.20) | 0.58 (0.35-0.96) | 0.03 |
| Model 3B ^{#, ‡, §,} | 1 (ref) | 0.67 (0.45-1.00) | 0.91 (0.61-1.36) | 0.62 (0.38-1.02) | 0.05 |
| | | | Stroke | | |
| Events (rate [*]) | 51 [6.9] | 55 [6.8] | 39 [4.7] | 39 [4.6] | |
| Model 1 ^{†, ‡, §} | 1 (ref) | 1.05 (0.72-1.54) | 0.79 (0.52-1.21) | 0.83 (0.54-1.27) | 0.09 |
| Model 2 ^{¶, ‡, §} | 1 (ref) | 1.10 (0.75-1.63) | 0.80 (0.52-1.24) | 0.84 (0.54-1.31) | 0.09 |
| Model 3A ^{#, ‡, §} | 1 (ref) | 1.14 (0.74-1.75) | 0.83 (0.52-1.34) | 0.86 (0.52-1.42) | 0.22 |
| Model 3B ^{#, ‡, §,} | 1 (ref) | 1.06 (0.72-1.58) | 0.78 (0.50-1.22) | 0.85 (0.53-1.35) | 0.10 |
| | | C | VD Death | | |
| Events (rate [*]) | 116 [15.5] | 55 [6.7] | 50 [6] | 36 [4.2] | |
| Model 1 ^{†, ‡, §} | 1 (ref) | 0.48 (0.35-0.66) | 0.50 (0.35-0.69) | 0.39 (0.27-0.57) | < 0.001 |
| Model 2 ^{¶, ‡, §} | 1 (ref) | 0.53 (0.38-0.74) | 0.60 (0.42-0.85) | 0.50 (0.33-0.74) | < 0.001 |
| Model 3A ^{#, ‡, §} | 1 (ref) | 0.54 (0.38-0.78) | 0.64 (0.44-0.94) | 0.52 (0.33-0.81) | 0.003 |
| Model 3B ^{#, ‡, §,} | 1 (ref) | 0.52 (0.38-0.73) | 0.6 (0.42-0.85) | 0.49 (0.32-0.74) | < 0.001 |

Abbreviations: CVD = cardiovascular disease; CHD = coronary heart disease

Major CVD represents the composite of the first reported fatal or non-fatal CHD, fatal or non-fatal stroke, or death attributable to any CVD. The first reported fatal or non-fatal CHD, fatal or non-fatal stroke, and death attributable to any CVD were examined as separate endpoints.

* Event rate per 1000 person-years

⁺ Model 1 adjusted for age and race/ethnicity (n=5253).

^{*} Data are hazard ratio (95% CI)

¹ Model 2 adjusted for model 1 covariates plus education, alcohol intake, smoking status, multimorbidity, selfrated health, and RAND-36 physical function score (n=5165).

[#] Model 3 adjusted for model 2 covariates plus BMI, systolic blood pressure, total cholesterol, HDL, and hs-CRP (n=4094).

¹¹ Model results estimated using multiple imputation by chained equations (MICE) from R *mice* package

| | 5 th Percentile | 10 th Percentile | 25 th Percentile | 50 th Percentile | 75 th percentile | 95 th percentile | |
|-----------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|--|
| | Total DLM hours/day | | | | | | |
| | 1.10 | 1.52 | 2.19 | 3.10 | 4.12 | 5.87 | |
| Major CVD | 1.04 (1.02-1.05) | 1 (ref) | 0.90 (0.86-0.95) | 0.76 (0.67-0.86) | 0.64 (0.52-0.78) | 0.56 (0.43-0.73) | |
| CHD | 1.03 (1.01-1.06) | 1 (ref) | 0.91 (0.84-0.97) | 0.77 (0.64-0.93) | 0.65 (0.48-0.89) | 0.57 (0.38-0.86) | |
| Stroke | 1.03 (1.00-1.05) | 1 (ref) | 0.93 (0.86-1.00) | 0.82 (0.68-0.99) | 0.73 (0.53-0.99) | 0.66 (0.44-0.99) | |
| CVD Death | 1.06 (1.04-1.09) | 1 (ref) | 0.83 (0.78-0.89) | 0.62 (0.51-0.74) | 0.45 (0.34-0.61) | 0.35 (0.24-0.52) | |
| | | | Light intensi | ty DLM hours/day | | | |
| | 0.95 | 1.31 | 1.87 | 2.59 | 3.44 | 4.80 | |
| Major CVD | 1.03 (1.02-1.05) | 1 (ref) | 0.90 (0.86-0.95) | 0.77 (0.68-0.87) | 0.65 (0.53-0.79) | 0.57 (0.44-0.73) | |
| CHD | 1.03 (1.00-1.05) | 1 (ref) | 0.92 (0.86-0.99) | 0.81 (0.67-0.97) | 0.71 (0.52-0.96) | 0.63 (0.43-0.94) | |
| Stroke | 1.03 (1.00-1.05) | 1 (ref) | 0.92 (0.86-0.99) | 0.80 (0.67-0.97) | 0.70 (0.52-0.95) | 0.63 (0.42-0.93) | |
| CVD Death | 1.06 (1.04-1.09) | 1 (ref) | 0.83 (0.78-0.89) | 0.62 (0.52-0.74) | 0.46 (0.34-0.61) | 0.36 (0.25-0.52) | |
| | |] | Moderate-to-vigorous | intensity DLM minutes | s/day | | |
| | 4.40 | 7.30 | 14.4 | 25.4 | 42.6 | 79.4 | |
| Major CVD | 1.03 (1.01-1.04) | 1 (ref) | 0.92 (0.88-0.97) | 0.80 (0.71-0.91) | 0.70 (0.57-0.86) | 0.63 (0.48-0.82) | |
| CHD | 1.04 (1.02-1.07) | 1 (ref) | 0.88 (0.82-0.94) | 0.71 (0.58-0.86) | 0.57 (0.42-0.78) | 0.48 (0.32-0.73) | |
| Stroke | 1.01 (0.99-1.04) | 1 (ref) | 0.97 (0.90-1.04) | 0.91 (0.75-1.10) | 0.86 (0.63-1.17) | 0.82 (0.55-1.23) | |
| CVD Death | 1.05 (1.02-1.07) | 1 (ref) | 0.87 (0.82-0.94) | 0.70 (0.59-0.84) | 0.56 (0.42-0.75) | 0.47 (0.32-0.69) | |

Table S3. Hazard ratio (95% CI) for associations of total, light, and moderate-to-vigorous intensity daily life movement (DLM) at 5th, 25th, 50th, 75th, and 95th percentile, relative to 10th percentile, with CVD Endpoints.

Abbreviations: CVD = cardiovascular disease; CHD = coronary heart disease; DLM = daily life movement

Major CVD represents the composite of the first reported fatal or non-fatal CHD, fatal or non-fatal stroke, or death attributable to any CVD. The first reported fatal or non-fatal CHD, fatal or non-fatal Stroke, and death attributable to any CVD were examined as separate endpoints.

Models adjusted for age, race/ethnicity, education, alcohol intake, smoking status, multimorbidity, self-rated health, and RAND-36 physical function score (N=5325).

Table S4. Hazard ratio (95% CI) for associations of total, light, and moderate-to-vigorous intensity daily life movement (DLM) at 5th, 25th, 50th, 75th, and 95th percentile, relative to 10th percentile, with CVD Endpoints, with models for light and moderate-to-vigorous intensity DLM mutually adjusted for each other.

| | 5 th Percentile | 10 th Percentile | 25 th Percentile | 50 th Percentile | 75 th percentile | 95 th percentile |
|-----------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | | | Total DL | M hours/day | | |
| | 1.10 | 1.52 | 2.19 | 3.10 | 4.12 | 5.87 |
| Major CVD | 1.04 (1.02-1.05) | 1 (ref) | 0.90 (0.86-0.95) | 0.76 (0.67-0.86) | 0.64 (0.52-0.78) | 0.56 (0.43-0.73) |
| CHD | 1.03 (1.01-1.06) | 1 (ref) | 0.91 (0.84-0.97) | 0.77 (0.64-0.93) | 0.65 (0.48-0.89) | 0.57 (0.38-0.86) |
| Stroke | 1.03 (1.00-1.05) | 1 (ref) | 0.93 (0.86-1.00) | 0.82 (0.68-0.99) | 0.73 (0.53-0.99) | 0.66 (0.44-0.99) |
| CVD Death | 1.06 (1.04-1.09) | 1 (ref) | 0.83 (0.78-0.89) | 0.62 (0.51-0.74) | 0.45 (0.34-0.61) | 0.35 (0.24-0.52) |
| | | | Light intensit | y DLM hours/day | | |
| | 0.95 | 1.31 | 1.87 | 2.59 | 3.44 | 4.80 |
| Major CVD | 1.03 (1.01-1.05) | 1 (ref) | 0.92 (0.87-0.97) | 0.81 (0.70-0.93) | 0.70 (0.55-0.90) | 0.63 (0.46-0.87) |
| CHD | 1.00 (0.98-1.03) | 1 (ref) | 0.99 (0.91-1.07) | 0.96 (0.77-1.20) | 0.94 (0.65-1.35) | 0.92 (0.57-1.48) |
| Stroke | 1.03 (1.00-1.06) | 1 (ref) | 0.91 (0.83-0.99) | 0.78 (0.62-0.98) | 0.66 (0.46-0.97) | 0.58 (0.36-0.96) |
| CVD Death | 1.06 (1.03-1.08) | 1 (ref) | 0.85 (0.79-0.92) | 0.66 (0.53-0.81) | 0.50 (0.36-0.71) | 0.41 (0.26-0.64) |
| | | | Moderate-to-vigorous i | ntensity DLM minutes/ | day | |
| | 4.40 | 7.30 | 14.4 | 25.4 | 42.6 | 79.4 |
| Major CVD | 1.01 (0.99-1.03) | 1 (ref) | 0.97 (0.91-1.02) | 0.91 (0.78-1.06) | 0.86 (0.67-1.10) | 0.82 (0.60-1.14) |
| CHD | 1.04 (1.01-1.07) | 1 (ref) | 0.89 (0.81-0.97) | 0.73 (0.57-0.92) | 0.59 (0.41-0.87) | 0.50 (0.31-0.83) |
| Stroke | 0.99 (0.96-1.02) | 1 (ref) | 1.02 (0.93-1.12) | 1.06 (0.84-1.34) | 1.10 (0.75-1.60) | 1.13 (0.69-1.86) |
| CVD Death | 1.01 (0.99-1.04) | 1 (ref) | 0.96 (0.89-1.04) | 0.90 (0.73-1.12) | 0.84 (0.59-1.19) | 0.80 (0.51-1.26) |
| | | | | | | |

Abbreviations: CVD = cardiovascular disease; CHD = coronary heart disease; DLM = daily life movement;

Major CVD represents the composite of the first reported fatal or non-fatal CHD, fatal or non-fatal stroke, or death attributable to any CVD. The first reported fatal or non-fatal CHD, fatal or non-fatal CHD, fatal or non-fatal stroke, and death attributable to any CVD were examined as separate endpoints.

Models adjusted for age, race/ethnicity, education, alcohol intake, smoking status, multimorbidity, self-rated health, and RAND-36 physical function score (N=5325).

| | HR (95% CI) for a 1-hour/day increment in daily life movement | | | | | |
|-----------------------|---|-----------------|---------------------|-----------------|---------------------------------------|-----------------|
| | Total DLM | <i>p</i> -value | Light intensity DLM | <i>p</i> -value | Moderate-to-vigorous intensity DLM | <i>p</i> -value |
| | | | Major CVD | | • | |
| Model 1* | 0.82 (0.77-0.87) | < 0.001 | 0.79 (0.73-0.85) | < 0.001 | 0.55 (0.43-0.71) | < 0.001 |
| Model 2 [†] | 0.86 (0.80-0.92) | < 0.001 | 0.84 (0.77-0.91) | < 0.001 | 0.67 (0.51-0.86) | < 0.001 |
| Model 3 [‡] | 0.89 (0.82-0.95) | < 0.001 | 0.87 (0.79-0.95) | < 0.001 | 0.72 (0.54-0.95) | 0.02 |
| Model 3A [§] | 0.87 (0.81-0.93) | < 0.001 | 0.84 (0.78-0.92) | < 0.001 | 0.70 (0.54-0.91) | 0.01 |
| | | | CHD | | · · · | |
| Model 1* | 0.79 (0.72-0.87) | < 0.001 | 0.78 (0.69-0.87) | < 0.001 | 0.38 (0.25-0.58) | < 0.001 |
| Model 2 [†] | 0.86 (0.77-0.95) | < 0.001 | 0.85 (0.76-0.96) | 0.01 | 0.50 (0.33-0.77) | < 0.001 |
| Model 3 [‡] | 0.84 (0.75-0.95) | < 0.001 | 0.85 (0.74-0.97) | 0.01 | 0.46 (0.29-0.74) | < 0.001 |
| Model 3A [§] | 0.87 (0.79-0.97) | 0.01 | 0.87 (0.77-0.99) | 0.04 | 0.55 (0.36-0.84) | 0.01 |
| | | | Stroke | | | |
| Model 1 [*] | 0.89 (0.81-0.98) | 0.020 | 0.87 (0.78-0.97) | 0.02 | 0.79 (0.55-1.13) | 0.2 |
| Model 2 [†] | 0.89 (0.81-0.99) | 0.03 | 0.87 (0.77-0.98) | 0.02 | 0.82 (0.57-1.19) | 0.29 |
| Model 3 [‡] | 0.92 (0.83-1.03) | 0.15 | 0.90 (0.79-1.03) | 0.12 | 0.90 (0.61-1.34) | 0.62 |
| Model 3A [§] | 0.89 (0.80-0.99) | 0.03 | 0.86 (0.76-0.98) | 0.02 | 0.81 (0.55-1.17) | 0.26 |
| | | | CVD Death | | | |
| Model 1 [*] | 0.71 (0.65-0.78) | < 0.001 | 0.66 (0.60-0.74) | < 0.001 | 0.38 (0.26-0.57) | < 0.001 |
| Model 2 [†] | 0.76 (0.69-0.84) | < 0.001 | 0.72 (0.64-0.81) | < 0.001 | 0.51 (0.34-0.75) | < 0.001 |
| Model 3 [‡] | 0.79 (0.71-0.88) | < 0.001 | 0.76 (0.67-0.86) | < 0.001 | 0.56 (0.36-0.85) | 0.01 |
| Model 3A [§] | 0.76 (0.69-0.84) | < 0.001 | 0.71 (0.63-0.81) | < 0.001 | 0.54 (0.36-0.81) | 0.003 |

Table S5. Associations of each 1-hour/day increment in daily life movement (DLM) with incident major CVD, CHD, stroke, and CVD death in the Objectively Measured Physical Activity and Cardiovascular Health (OPACH) cohort 2012-2020.

Abbreviations: CVD = cardiovascular disease; CHD = coronary heart disease; DLM = daily life movement

Major CVD represents the composite of the first reported fatal or non-fatal CHD, fatal or non-fatal stroke, or death attributable to any CVD. The first reported fatal or non-fatal CHD, fatal or non-fatal CHD, fatal or non-fatal stroke, and death attributable to any CVD were examined as separate endpoints.

* Model 1 adjusted for age and race/ethnicity (N=5416).

⁺ Model 2 adjusted for model 1 covariates plus education, alcohol intake, smoking status, multimorbidity, self-rated health, and RAND-36 physical function score (N=5325).

⁺ Model 3 adjusted for model 2 covariates plus BMI, systolic blood pressure, total cholesterol, HDL, and hs-CRP (N=4221).

[§] Model 3A results were estimated using multiple imputation by chained equations (MICE) from R *mice* package and contained model 3 covariates.

Table S6. Associations of each 1-hour/day increment in total and mutually adjusted light intensity and moderate-to-vigorous intensity (MV) daily life movement (DLM) with incident major CVD, CHD, stroke, and CVD death in the Objectively Measured Physical Activity and Cardiovascular Health (OPACH) cohort 2012-2020.

| | | (95% CI) for | a 1-hour/day increment | in daily life 1 | movement (DLM) | |
|-----------------------|-------------------|-----------------|------------------------|-----------------|----------------------|-----------------|
| | Total DLM | <i>p</i> -value | Light intensity | <i>p</i> -value | Moderate-to-vigorous | <i>p</i> -value |
| | | | DLM* | | intensity DLM* | |
| | | | Major CVD | | | |
| Model 1 [†] | 0.82 (0.77, 0.87) | < 0.001 | 0.81 (0.74, 0.89) | < 0.001 | 0.82 (0.61, 1.11) | 0.20 |
| Model 2 [‡] | 0.86 (0.80, 0.92) | < 0.001 | 0.86 (0.78, 0.94) | < 0.001 | 0.87 (0.65, 1.17) | 0.35 |
| Model 3 [§] | 0.89 (0.82, 0.95) | < 0.001 | 0.89 (0.80, 0.99) | 0.03 | 0.87 (0.63, 1.20) | 0.40 |
| Model 3A [¶] | 0.87 (0.81, 0.93) | < 0.001 | 0.86 (0.78, 0.94) | 0.002 | 0.91 (0.68, 1.22) | 0.52 |
| | | | CHD | | | |
| Model 1 [†] | 0.79 (0.72, 0.87) | < 0.001 | 0.87 (0.76, 0.99) | 0.04 | 0.51 (0.31, 0.84) | 0.01 |
| Model 2 [‡] | 0.86 (0.77, 0.95) | < 0.001 | 0.93 (0.81, 1.07) | 0.32 | 0.57 (0.35, 0.94) | 0.03 |
| Model 3 [§] | 0.84 (0.75, 0.95) | < 0.001 | 0.94 (0.81, 1.10) | 0.46 | 0.51 (0.30, 0.88) | 0.02 |
| Model 3A [¶] | 0.87 (0.79, 0.97) | 0.01 | 0.95 (0.82, 1.10) | 0.48 | 0.60 (0.37, 0.99) | 0.05 |
| | | | Stroke | | | |
| Model 1 [†] | 0.89 (0.81, 0.98) | 0.02 | 0.87 (0.76, 0.99) | 0.04 | 1.02 (0.67, 1.56) | 0.92 |
| Model 2 [‡] | 0.89 (0.81, 0.99) | 0.03 | 0.86 (0.74, 0.99) | 0.03 | 1.06 (0.69, 1.62) | 0.79 |
| Model 3 [§] | 0.92 (0.83, 1.03) | 0.15 | 0.88 (0.75, 1.03) | 0.12 | 1.10 (0.70, 1.72) | 0.69 |
| Model 3A [¶] | 0.89 (0.80, 0.99) | 0.03 | 0.86 (0.74, 0.99) | 0.04 | 1.03 (0.67, 1.59) | 0.88 |
| | | | CVD Death | | | |
| Model 1 [†] | 0.71 (0.65, 0.78) | < 0.001 | 0.68 (0.60, 0.78) | < 0.001 | 0.83 (0.54, 1.29) | 0.42 |
| Model 2 [‡] | 0.76 (0.69, 0.84) | < 0.001 | 0.73 (0.64, 0.84) | < 0.001 | 0.90 (0.58, 1.40) | 0.63 |
| Model 3 [§] | 0.79 (0.71, 0.88) | < 0.001 | 0.77 (0.67, 0.90) | < 0.001 | 0.87 (0.54, 1.41) | 0.58 |
| Model 3A [¶] | 0.76 (0.69, 0.84) | < 0.001 | 0.72 (0.62, 0.82) | < 0.001 | 0.98 (0.63, 1.53) | 0.94 |

Abbreviations: CVD = cardiovascular disease; CHD = coronary heart disease; DLM = daily life movement

Major CVD represents the composite of the first reported fatal or non-fatal CHD, fatal or non-fatal stroke, or death attributable to any CVD. The first reported fatal or non-fatal CHD, fatal or non-fatal CHD, fatal or non-fatal stroke, and death attributable to any CVD were examined as separate endpoints.

* Models for light intensity and moderate-to-vigorous intensity DLM were mutually adjusted for each other.

⁺ Model 1 adjusted for age and race/ethnicity (N=5416).

⁺ Model 2 adjusted for model 1 covariates plus education, alcohol intake, smoking status, multimorbidity, self-rated health, and RAND-36 physical function score (N=5325).

[§] Model 3 adjusted for model 2 covariates plus BMI, systolic blood pressure, total cholesterol, HDL, and hs-CRP (N=4221).

[¶] Model 3A results were estimated using multiple imputation by chained equations (MICE) from R *mice* package and contained model 3 covariates.

| C V D Chuponnas | | | | |
|-----------------|------------------|---------|--------------------------------|---------|
| CVD endpoint | Light intensity | p-value | Moderate-to-vigorous intensity | p-value |
| | DLM | | DLM | |
| Major CVD | 0.93 (0.88-0.97) | 0.001 | 0.96 (0.89-1.04) | 0.35 |
| CHD | 0.97 (0.90-1.03) | 0.32 | 0.86 (0.76-0.98) | 0.03 |
| Stroke | 0.93 (0.86-0.99) | 0.03 | 1.02 (0.91-1.14) | 0.79 |
| CVD Death | 0.86 (0.80-0.92) | < 0.001 | 0.97 (0.86-1.09) | 0.63 |

Table S7. Hazard ratio (95% CI) for associations of mutually adjusted^{*} light intensity and moderate-to-vigorous intensity DLM MET-hours/day with CVD endpoints.

Abbreviations: CVD = cardiovascular disease; CHD = coronary heart disease; DLM = daily life movement

Major CVD represents the composite of the first reported fatal or non-fatal CHD, fatal or non-fatal stroke, or death attributable to any CVD. The first reported fatal or non-fatal CHD, fatal or non-fatal stroke, and death attributable to any CVD were examined as separate endpoints.

* Model adjusted for age, race/ethnicity, education, alcohol intake, smoking status, multimorbidity, self-rated health, and RAND-36 physical function score (N=5325).

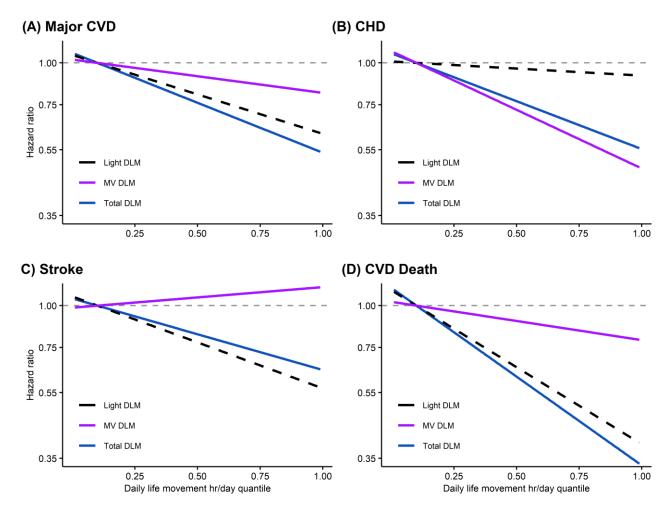


Figure S1. Continuous dose-response associations of total, and mutually adjusted light and moderate-tovigorous intensity (MV) daily life movement (DLM) hours/day quantiles with (A) incident major CVD, (B) CHD, (C) stroke, and (D) CVD death.

Abbreviations: CVD = cardiovascular disease; CHD = coronary heart disease; DLM = daily life movement; MV = moderate-to-vigorous intensity

Models adjusted for age, race/ethnicity, education, alcohol intake, smoking status, multimorbidity, self-rated health, and RAND-36 physical function score (N=5325). Results were trimmed at the 1st and 99th percentiles. The reference was set to the 10th percentile of total (1.52 hours), light intensity (1.31 hours), or moderate-to-vigorous intensity (0.12 hours or 7.3 minutes) DLM. HR (95% CI) for associations of total, light, and moderate-to-vigorous intensity DLM at 5th, 25th, 50th, 75th, and 95th percentiles with CVD are displayed in Table S4.