**Supplemental Digital Content 7. Results from sex stratification**

**Figure 5.** Sex-stratified relative hazard of all-cause mortality as physical behavior score increases in the NIH-AARP Diet and Health Study Cohort, 2004-2011.

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Caption: The relative hazard of all-cause mortality plotted from the 5th percentile, 53.5, to the maximum score of 100, separately for men and women. Model adjusted for age (yr), sex, education (< 12 y, high school graduate, some college, college graduate, unknown), smoking history (never, stopped 10+ yr, stopped 5–9 yr, stopped 1–4 yr, stopped <1 yr, current smoker, unknown), race/ethnicity (Non-Hispanic White, Non-Hispanic Black, Other, unknown), overall health (excellent, very good, good, fair, unknown), body mass index (<25, 25–29.9, 30+ kg/m2, unknown), physician diagnosed depression (yes, no, or missing), physician diagnosed heart disease (yes, no, missing). Shading indicates 95% confidence intervals.

**SDC9. Table 2. Sex Stratified comparison of physical behavior score to group components for all-cause and cause-specific mortality in the NIH-AARP Diet and Health Study Cohort, 2004-2011.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| *Men* |  | Q1 | Q2 | Q3 | Q4 | Q5 |
| All cause | Physical Behavior Score | ref | 0.71 (0.66, 0.76) | 0.66 (0.61, 0.71) | 0.63 (0.58, 0.68) | 0.55 (0.50, 0.60) |
|  | Moderate-vigorous aerobic activity | ref | 0.73 (0.72, 0.82) | 0.70 (0.65, 0.75) | 0.67 (0.61, 0.72) | 0.65 (0.59, 0.71) |
|  | Sedentary | ref | 0.86 (0.79, 0.93) | 0.89 (0.83, 0.95) | 0.84 (0.78, 0.89) | 0.80 (0.73, 0.86) |
|  | Sleep |  | 1.14 (1.05, 1.24) | 1.06 (0.99, 1.13) | ref | 1.20 (1.13, 1.27) |
| CVD | Physical Behavior Score | ref | 0.69 (0.61, 0.77) | 0.62 (0.54, 0.70) | 0.55 (0.48, 0.64) | 0.47 (0.39, 0.55) |
|  | Moderate-vigorous aerobic activity | ref | 0.70 (0.58, 0.83) | 0.56 (0.42, 0.70) | 0.55 (0.49, 0.69) | 0.60 (0.50, 0.70) |
|  | Sedentary | ref | 0.81 (0.69, 0.93) | 0.89 (0.79, 0.99) | 0.83 (0.73, 0.92) | 0.71 (0.60, 0.82) |
|  | Sleep |  | 1.21 (1.04, 1.37) | 1.06 (0.94, 1.18) | ref | 1.22 (1.09, 1.34) |
| Cancer | Physical Behavior Score | ref | 0.79 (0.70, 0.90) | 0.78 (0.69, 0.89) | 0.75 (0.66, 0.86) | 0.72 (0.63, 0.83) |
|  | Moderate-vigorous aerobic activity | ref | 0.87 (0.75, 0.99) | 0.86 (0.74, 0.99) | 0.82 (0.69, 0.95) | 0.83 (0.70, 0.96) |
|  | Sedentary | ref | 0.91 (0.74, 1.06) | 0.91 (0.76, 1.04) | 0.91 (0.74, 1.06) | 0.91 (0.77, 1.04) |
|  | Sleep |  | 1.10 (0.99, 1.11) | 1.04 (0.96, 1.11) | ref | 1.09 (1.00, 1.17) |
| Other | Physical Behavior Score | ref | 0.64 (0.56, 0.73) | 0.59 (0.51, 0.68) | 0.54 (0.46, 0.62) | 0.44 (0.36, 0.53) |
|  | Moderate-vigorous aerobic activity | ref | 0.66 (0.57, 0.76) | 0.60 (0.50, 0.71) | 0.60 (0.50, 0.71) | 0.51 (0.40, 0.62) |
|  | Sedentary | ref | 0.84 (0.71, 0.97) | 0.82 (0.71, 0.93) | 0.74 (0.63, 0.85) | 0.75 (0.63, 0.87) |
|  | Sleep |  | 1.17 (1.04, 1.21) | 1.12 (1.03, 1.21) | ref | 1.30 (1.21, 1.40) |
| Women |  | Q1 | Q2 | Q3 | Q4 | Q5 |
| All cause | Physical Behavior Score | ref | 0.72 (0.64, 0.80) | 0.58 (0.51, 0.64) | 0.54 (0.49, 0.60) | 0.46 (0.41, 0.52) |
|  | Moderate-vigorous aerobic activity | ref | 0.73 (0.66, 0.80) | 0.63 (0.55, 0.71) | 0.62 (0.54, 0.70) | 0.59 (0.51, 0.68) |
|  | Sedentary | ref | 0.86 (0.77, 0.95) | 0.78 (0.70, 0.86) | 0.75 (0.68, 0.83) | 0.69 (0.61, 0.78) |
|  | Sleep |  | 1.11 (1.01, 1.02) | 0.95 (0.89, 1.02) | ref | 1.21 (1.13, 1.29) |
| CVD | Physical Behavior Score | ref | 0.65 (0.54, 0.79) | 0.44 (0.35, 0.55) | 0.42 (0.33, 0.52) | 0.40 (0.32, 0.50) |
|  | Moderate-vigorous aerobic activity | ref | 0.67 (0.54, 0.81) | 0.57 (0.42, 0.72) | 0.51 (0.35, 0.67) | 0.53 (0.36, 0.70) |
|  | Sedentary | ref | 0.86 (0.70, 1.03) | 0.74 (0.60, 0.89) | 0.68 (0.53, 0.82) | 0.66 (0.50, 0.83) |
|  | Sleep |  | 1.14 (0.95, 1.03) | 0.91 (0.78, 1.03) | ref | 1.22 (1.07, 1.36) |
| Cancer | Physical Behavior Score | ref | 0.89 (0.75, 1.08) | 0.84 (0.70, 1.01) | 0.79 (0.66, 0.95) | 0.66 (0.54, 0.80) |
|  | Moderate-vigorous aerobic activity | ref | 0.87 (0.75, 0.99) | 0.78 (0.65, 0.90) | 0.82 (0.70, 0.95) | 0.75 (0.62, 0.88) |
|  | Sedentary | ref | 0.89 (0.74, 1.03) | 0.87 (0.75, 1.00) | 0.91 (0.78, 1.03) | 0.84 (0.71, 0.98) |
|  | Sleep |  | 1.04 (0.87, 1.07) | 0.97 (0.88, 1.07) | ref | 1.26 (1.14, 1.38) |
| Other | Physical Behavior Score | ref | 0.63 (0.52, 0.77) | 0.46 (0.37, 0.57) | 0.40 (0.32, 0.49) | 0.35 (0.26, 0.44) |
|  | Moderate-vigorous aerobic activity | ref | 0.65 (0.51, 0.78) | 0.54 (0.40, 0.69) | 0.49 (0.33, 0.64) | 0.49 (0.33, 0.65) |
|  | Sedentary | ref | 0.82 (0.66, 0.98) | 0.69 (0.55, 0.83) | 0.64 (0.50, 0.78) | 0.54 (0.38, 0.71) |
|  | Sleep |  | 1.17 (0.99, 1.08) | 0.97 (0.85, 1.08) | ref | 1.14 (1.00, 1.29) |

Multivariate models adjusted for age (yr), education (< 12 y, high school graduate, some college, college graduate, unknown), smoking history (never, stopped 10+ yr, stopped 5–9 yr, stopped 1–4 yr, stopped <1 yr, current smoker, unknown), race/ethnicity (Non-Hispanic White, Non-Hispanic Black, Other, unknown), overall health (excellent, very good, good, fair, unknown), body mass index (<25, 25–29.9, 30+ kg/m2, unknown), physician diagnosed depression (yes, no, or missing), physician diagnosed heart disease (yes, no, missing), For aerobic activity Q1 is low physical activity (0-27.8 MET-hr/wk), for sedentary time Q1 is high sitting (10.5+ hr/day) and for sleep referent (Q3) is 7-8 hr/day, Q1 is <5hr/day, Q2 is 5-7 hr/day and Q4 is >9hr/day. Aerobic activity, sedentary time and sleep were mutually adjusted in the same models.