Sleep Duration and Its Associations with Mortality and Quality of Life in Chronic Obstruction Pulmonary Disease: Results from the 2007–2015 KNAHNES

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**Supplementary Table 1**. Univariable analysis of all-cause mortality by sleep duration

*Data were analyzed with Cox proportional hazard models and are presented as unadjusted hazard ratios (95% confidence interval [CI]).*

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|  | **Hazard ratio (95% CI)** |
| **Sleep duration, h/day** |  |
| **<6 vs. 6–8** | 1.35 (1.07, 1.71) |
| **>8 vs. 6–8** | 1.21 (0.85, 1.73) |
| **Age, years** |  |
| **50–59 vs. 40–49** | 2.60 (1.01, 6.68) |
| **60–69 vs. 40–49** | 5.36 (2.19, 13.16) |
| **≥70 vs. 40–49** | 14.25 (5.88, 34.56) |
| **Men** | 1.69 (1.31, 2.18) |
| **Body mass index, kg/m2** | 0.93 (0.89, 0.96) |
| **Former or current smoker** | 1.39 (1.11, 1.75) |
| **Heavy drinker** | 0.84 (0.60, 1.17) |
| **Education (high school or above)** | 0.47 (0.37, 0.59) |
| **Income (lowest quartile)** | 1.34 (1.08, 1.66) |
| **Living with a spouse** | 0.79 (0.62, 1.01) |
| **Occupation** | 0.47 (0.39, 0.58) |
| **Regular exercise** | 0.63 (0.48, 0.82) |
| **FEV1, % predicted** | 1.00 (0.99, 1.00) |
| **Hypertension** | 1.31 (1.07, 1.60) |
| **Diabetes** | 1.32 (1.06, 1.64) |
| **Cardiovascular disease** | 1.65 (1.19, 2.28) |
| **Cancer** | 1.99 (1.34, 2.94) |

**Supplementary Table 2**. Univariable analysis of the European Quality of Life-5 Dimensions Index by sleep duration

|  |  |
| --- | --- |
|  | **Linear regression coefficient (95% CI)** |
| **Sleep duration, h/day** | 　 |
| **<6 vs. 6–8** | -0.04 (-0.06, -0.03) |
| **>8 vs. 6–8** | -0.02 (-0.04, 0.003) |
| **Age, years** | 　 |
| **50-59 vs. 40–49** | -0.03 (-0.06, -0.01)　 |
| **60-69 vs. 40–49** | -0.05 (-0.07, -0.03)　 |
| **≥70 vs. 40–49** | -0.08 (-0.11, -0.06)　 |
| **Men** | 0.06 (0.05, 0.07)　 |
| **Body mass index, kg/m2** | 0.002 (-0.001, 0.004)　 |
| **Former or current smoker** | 0.03 (0.01, 0.04)　 |
| **Heavy drinker** | 0.04 (0.02, 0.06)　 |
| **Education (high school or above)** | 0.04 (0.03, 0.05)　 |
| **Income (lowest quartile)** | -0.05 (-0.07, -0.04)　 |
| **Living with a spouse** | 0.07 (0.06, 0.09)　 |
| **Occupation** | 0.09 (0.07, 0.10)　 |
| **Regular exercise** | 0.04 (0.02, 0.05)　 |
| **FEV1, % predicted** | 0.0003 (-0.00004, 0.0007)　 |
| **Hypertension** | -0.01 (-0.02, 0.003)　 |
| **Diabetes** | -0.01 (-0.03, 0.002)　 |
| **Cardiovascular disease** | -0.04 (-0.07, -0.02) |
| **Cancer** | -0.14 (-0.17, -0.11) |

*Data were analyzed with linear regression and are presented as linear regression coefficients (95% confidence interval).*