

## Zusammenfassung des Beitrags 186

**ID: 186**

### Wissenschaftliche Abstracts

*Themen:* Epidemiologie in Public Health Wissenschaft und Praxis

*Stichworte:* lifestyle, risk score, mortality, NHANES, accelerometer devices

### **Lifestyle Risk Factors in relation to all-cause and cause-specific mortality: An analysis in NHANES**

**Savli, Markus<sup>1</sup>; Siebert, Uwe<sup>1</sup>; Schmid, Daniela<sup>1,2</sup>**

<sup>1</sup>Division for Quantitative Methods in Public Health and Health Service Research, Department of Public Health, UMIT TIROL - University for Health Sciences, Medical Informatics and Technology, Hall in Tirol, Austria; <sup>2</sup>Faculty of Life Sciences, Albstadt-Sigmaringen University, Sigmaringen, Germany; [markus.savli@gmail.com](mailto:markus.savli@gmail.com)

#### Background

The aim of the present study was to estimate the combined effect of six modifiable lifestyle risk factors considering objectively measured physical activity behaviors on all-cause and cause-specific mortality.

#### Methods

Data of 4,018 participants,  $\geq 40$  years from the National Health and Nutrition Examination Survey (NHANES) 2003-2006 cycles were used to calculate a lifestyle risk factor score including smoking, alcohol intake, body mass index, diet quality, physical activity, and sedentary time. Higher lifestyle scores were assigned to more unhealthy behavior by quintiles or terciles. Moderate-to-vigorous physical activity and sedentary time were determined from objectively measured accelerometer devices. The association of the lifestyle risk score with mortality was estimated by cox proportional hazard models with follow-up data through Dec 31, 2019. The 95% confidence interval (CI) was calculated for the hazard ratio (HR).

#### Results

During an unadjusted median of 13.9 years (167 months, IQR: 122 – 184) follow-up time for men and 14.3 years (172 months, IQR: 157 – 188) follow-up time for women a total of 1,328 deaths (731 men and 597 women) occurred within the analytic cohort. Compared with participants in the low-risk lifestyle factor quintile, the HR in the highest quintile was 2.00 (95% CI, 1.49 2.69, p for trend:  $<0.001$ ) for all-cause mortality, 1.75 (95% CI, 1.01 3.01, p for trend: 0.045) for cardiovascular mortality, and 1.77 (95% CI, 0.99 3.17, p for trend: 0.040) for cancer mortality in the multivariate adjusted model. Although the significant linear trend held for the both sexes, men (2.41, 95% CI 1.67 3.48) showed a higher HR in the highest lifestyle risk factor quintile than women (1.68, 95% CI 1.04 2.73). All sensitivity analyses in the multivariable-adjusted model remained robust and statistically significant for all-cause mortality.

#### Conclusions

Our study shows that combined unhealthy lifestyle risk factors may increase mortality risk in adult men and women. Recommendations for healthy lifestyle interventions should point towards behavioral changes, including increases in physical activity and diet quality, and decreases in smoking, alcohol consumption, sedentary behavior, and body weight.