Behaviors Explain Most Mortality Differences

BY JANE ANDERSON

Unhealthy behaviors such as a lack of exercise and a poor diet explain a substantial part of differences in mortality between the well off and those low on the socioeconomic ladder, study findings show.

An assessment of smoking, alcohol consumption, diet, and physical activity among civil servants living in London over a 24-year period found "a clear social gradient in mortality, with lower socioeconomic position being associated with higher mortality," the authors said (JAMA 2010;303:1159-66).

"Unhealthy behaviors such as smoking, unhealthy diet, and low levels of physical activity were strongly related to mortality, as well as nonconsumption of alcohol," the authors wrote. Heavy alcohol consumption was more prevalent among participants in the highest socioeconomic bracket.

The researchers, led by Silvia Stringhini of the Centre for Research in Epidemiology and Population Health in Villejuif, France, and her associates, sought to examine unhealthy behaviors as they relate to the association between socioeconomic position and mortality. To do this accurately, they assessed behaviors in the 10,308 study participants five times: once at the beginning of the study and four times during the follow-up period.

The participants' socioeconomic position was determined from their civil service employment grades at the beginning of the study, when they were aged 35-55 years.

A total of 654 participants died during the study, and after adjustments for sex and age, the researchers determined that those with the lowest socioeconomic position had a risk of dying that was 1.6 times higher than those in the highest socioeconomic bracket.

Overall, unhealthy behaviors noted at the beginning of the study explained 29% of cardiovascular disease mortality, 61% of mortality not related to cardiovascular disease, and 42% of overall mortality.

By the end of the study, the researchers found these unhealthy behaviors explained 45% of cardiovascular disease deaths, 94% of mortality not related to cardiovascular disease, and 72% of deaths overall.

Smoking rates stayed fairly constant at around 32%-35% throughout the study. However, mortality risk rose in relation to diet (from 7% to 17% for all-cause mortality), physical activity (from 5% to 21% for all-cause mortality), and alcohol consumption (from 3% to 12% for all-cause mortality).

The authors noted that mortality risk for moderate drinkers was lower compared with both nondrinkers and heavy drinkers. Participants who abstained from alcohol completely were at higher risk for death from cardiovascular disease, while those who drank heavily had a higher cancer death risk.

The study results show that health behaviors explain more of socioeconomic differences in death rates than what has been observed in previous studies, James R. Dunn, Ph.D., of McMaster University in Hamilton, Ont., wrote in an accompanying editorial (JAMA 2010;303:1199-200).

However, the findings don't suggest that socioeconomic differences in health status can be reduced simply to socioeconomic differences in unhealthy behaviors, Dr. Dunn said. "Accordingly, it would be incorrect to infer that there is no need to be concerned with social and economic justice, only health behavior," he said.

Evidence suggests that early childhood development involving stress management capabilities and health behavior may play a role in empowering adults to choose healthier behaviors, he said. Children with lower socioeconomic status are more likely to have deficits in these areas. ■

Disclosures: *Neither Ms. Stringhini nor Dr. Dunn reported any financial disclosures. The study has been supported by grants from the British Medical Research Council, the British Heart Foundation, the British Health and Safety Executive, and the British Department of Health; a grant from the U.S. National Heart, Lung, and Blood Institute; and grants from the U.S. National Institute on Aging.*