

Hypertension among lower-status employees lingers well into retirement

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Retirement from some occupations may not provide relief from the potentially devastating health effects of work-related hypertension, according to a new study from UC Davis.

Published in the June issue of the *Journal of Occupational and Environmental Medicine*, the study is the first to show that retirement-aged Americans who held higher-status jobs — such as chief executives, financial managers and management analysts — tend to have the lowest rates of hypertension, while those who had lower-status jobs tend to have the highest rates.

Hypertension is diagnosed when blood pressure on the artery walls is consistently too high. This condition can eventually damage cells of the arteries' inner lining, leading to angina, heart attack, stroke, aneurysm, kidney failure and other serious health problems.

"People's occupations during their working years can clearly be a risk for hypertension after they retire," said senior study author Paul Leigh, a professor with the Center for Healthcare Policy and Research and the Department of Public Health Sciences at UC Davis. "The body seems to have built up a stress reaction that takes years to ramp down and may last well beyond age 75."

While one European study correlated pre-retirement jobs with heart disease among seniors, most similar research has focused on working people between the ages of 25 and 65. Consequently, Leigh said, "it's

been an open question whether occupations could influence hypertension after retirement, and we wanted to help close that gap in the research."

Leigh, an expert in economics and occupational illnesses, and study co-author Juan Du, who recently received her Ph.D. from UC Davis and is now an assistant professor in the School of Business at The College of New Jersey, based their research on data compiled by the University of Michigan Health and Retirement Study. Funded by the National Institute on Aging, the study surveys more than 22,000 non-institutionalized Americans over the age of 50 every two years and includes detailed information on job history, health status, lifestyle and socioeconomic factors.

Using data collected between March 2004 and February 2005, Leigh and Du looked at 7,289 men and women over the age of 65. Their occupations during working years ran the gamut — from managers and white-collar professionals to clerical and blue-collar workers. Just a small percentage was still working at the time the data was collected — 10 percent of 65-year-olds and 2 percent of 75-year-olds.

The researchers then divided sub-samples by age groups — 65 and older, 70 and older and 75 and older — as well as by job type, job tenure, gender and physician diagnosis of hypertension. After controlling for variables such as education, race, income, smoking, alcohol consumption, body mass index and co-morbidities, they analyzed the data for statistical associations.

What they found with retirees was consistent with studies of those who are currently employed: higher-status occupations are associated with less hypertension than lower-status occupations.

"For a long time, the conventional wisdom was that the people at the top would be more likely to have hypertension, but just the opposite is true,"

said Leigh. "Hypertension is more common among people on the lowest rungs of the occupational ladder."

Unlike executives and professionals like architects and engineers, Leigh explained, workers in positions such as sales, administrative support, construction and food preparation have little control over decision-making, are under pressure to get a specified amount of work done in a certain amount of time and may feel inadequate about their positions in the workplace hierarchy. Consequently, their stress levels tend to be higher, which can lead to high blood pressure and, eventually, hypertension.

There were two interesting gender-related distinctions between the outcomes of this study and others. Overall, the link between higher-status occupation and lower prevalence of hypertension was stronger for male seniors than for female seniors. Moreover, females in professional positions had more hypertension than female managers, whereas male professionals did not have more hypertension than male managers. Leigh explained that this anomaly could be reflective of the fact that women have historically held lower-status professional jobs than men.

"Professional occupations include teaching and nursing, which in the past were jobs typically held by women," Leigh said. "Women in the study did not tend to be doctors or lawyers, meaning that they were more likely to have jobs on the lower rungs of the professions. This could account for their higher prevalence of hypertension when compared to female managers. Whatever the reason, the link between women in professional jobs and their risks of hypertension deserves more study."

The most important study outcome, according to Leigh, is that the pool of people thought to have job-related hypertension may be considerably larger than previously assumed. One study estimated that 12 percent of all coronary heart disease deaths can be attributed to occupation. When

this estimate is applied to seniors, there could be an additional 2.1 million people in the United States with job-related hypertension.

Leigh hopes that this study will help bring job history on par with lifestyle factors when physicians consider hypertension risks with their patients.

"Even among the obese, we found that occupation correlated closely with [hypertension](#)," Leigh said. "We don't want to downplay the importance of lifestyle issues and health. But, in addition to recommending lifestyle changes and prescribing medication, physicians could advocate for a change of working conditions for these jobs in society at large to improve health outcomes for workers."

Source: University of California - Davis - Health System ([news](#) : [web](#))

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