

Study finds drop in death rates from strokes over last two decades

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Despite the significant reduction in the overall incidence and death rates from strokes in the United States over the past twenty years, more attention needs to be paid to specific age groups, a recent study found.

The new research, conducted by Dr. Silvia Koton of Tel Aviv University's Sackler Faculty of Medicine and the Bloomberg School of Public Health at Johns Hopkins University, Prof. Josef Coresh of the Bloomberg School of Public Health, and a team of experts at Hopkins, the University of North Carolina, Chapel Hill and the University of Arizona, found a 24 percent decline per decade in first-time strokes and a 20 percent drop per decade in deaths after strokes in the last 24 years.

Published in the *Journal of the American Medical Association*, the study provides empirical evidence of a decline in [stroke incidence](#) and subsequent mortality across racial and gender groups. However, it also indicates a disparity of stroke incidence across different age groups.

An ounce of prevention

According to the study, the decline in [stroke risk](#) was concentrated mainly in the over 65 set, with little progress in reducing the risk of strokes among young people. In contrast, the drop in stroke-related deaths was primarily found among those under age 65, with mortality rates holding firm in older people.

If the obesity epidemic in the U.S. and other countries progresses as expected, the incidence of high blood pressure, diabetes, and high cholesterol levels will rise, and millions will face an increased risk of stroke, says Dr. Koton. "Stroke is not only the number four cause of death in the U.S., but the leading cause of long-term disability in adults. As a result, the prevention of strokes is crucial," said Dr. Koton.

"Since strokes mainly affect older populations, and our population is aging, it is important to learn about changes in stroke incidence and mortality. Our findings are encouraging, but they also suggest that there are specific groups that require more attention. Adopting a healthy life style and controlling cardiovascular risk factors is important for everybody, but apparently there is a need to focus stroke prevention efforts on particular population subgroups."

Extensive study population

The study based its findings on data presented by Atherosclerosis Risk in Communities (ARIC) research, which monitored 15,792 residents

between the ages of 45 and 64 in four U.S. communities starting in the late 1980s. In the new study, researchers followed the progress of 14,357 participants who were free of stroke in 1987, with an eye to stroke hospitalizations and deaths between 1987-2011.

Extensive information was collected through interviews and physical exams at baseline (1987-1989) and in three follow-up visits (1990-92, 1993-95, and 1996-98). In addition to the check-ups, annual phone interviews were conducted as well as active surveillance of discharges from local hospitals until December 31, 2011.

"Decreases in stroke incidence and mortality have previously been demonstrated, but empirical data on validated stroke incidence are scarce," said Dr. Koton. "In the ARIC study, each stroke was confirmed by expert review of medical charts using uniform criteria. In addition, previous reports on long-term trends in stroke incidence by race have not been consistent, with some studies in the U.S. showing decreases in stroke incidence over time only among whites—but not African-Americans. Our study shows that stroke incidence and mortality are decreasing also among African-Americans."

The researchers hope their findings will provide a basis for future studies that focus on the reasons for age disparities in stroke incidence and subsequent mortality.

Provided by Tel Aviv University

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