

1 in 7 Americans over age 70 has dementia

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One in seven Americans over the age of 70 suffers from dementia, according to the first known nationally representative, population-based study to include men and women from all regions of the country.

About 3.4 million people, or 13.9 percent of the population age 71 and older, have some form of dementia, the study found. As expected, the prevalence of dementia increased dramatically with age, from five percent of those aged 71 to 79 to 37.4 percent of those age 90 and older.

About 2.4 million of those with dementia, or 9.7 percent of the population age 71 and older, were found to have Alzheimer's disease, the most common cause of dementia, according to the study.

Published in the November 2007 issue of Neuroepidemiology, the study is based on data from 856 men and women who participated in the Aging, Demographics and Memory Study conducted in 2002 by researchers at the University of Michigan Institute for Social Research (ISR) and Duke University Medical Center and funded by the National Institute on Aging. The study was part of the larger ISR Health and Retirement Study, a nationally representative survey of Americans age 51 and older.

"These conditions affect millions of older Americans and touch nearly every family in some way, and the situation is only going to get worse as the population ages," said Duke University researcher Brenda Plassman, the lead author of the journal article.



The study provides the first prevalence estimates based on a nationally representative sample of older adults from all regions of the United States, allowing policymakers and care providers to make better plans for caring for those with dementia and their families. Plassman and coauthor Kenneth Langa, who is affiliated with ISR and with the U-M and Veterans Affairs Health Systems, also note that the findings will assist in assessments of the impact of future treatment advances as they become available, and in gauging how well the country is doing in controlling and treating Alzheimer's disease and other dementias.

"These data about dementia are linked to an enormous wealth of economic, health, psychological, and other information about these same individuals and their families over time," said Richard Suzman, director of the Behavioral and Social Research Program at the National Institute on Aging. "We can now track the impact and costs of dementia on society, the economy, and families in ways we never could before."

For the study, participants were assessed in their homes by a specially trained nurse and neuropsychology technician, using a diagnostic protocol similar to the type of memory evaluation done in a medical clinic. The team collected detailed information about how the participant was functioning in daily activities from a knowledgeable informant, usually a family member or close friend. They also administered a battery of neuropsychological tests, including measures of memory, orientation, language, attention and problem solving ability. In addition, DNA samples were collected from a cheek swab to test for the presence of the APOE e4 allele, which has been linked to an increased risk of developing Alzheimer's disease.

The information was reviewed in case conferences by a team of Duke physicians and psychologists, and final diagnoses were made by another consensus panel of experts.



Overall, the researchers found that Alzheimer's disease accounted for approximately 69.9 percent of all dementia, while vascular dementia – often caused by stroke – accounted for 17.4 percent. With increasing age, Alzheimer's disease accounted for progressively more of the dementia cases, so that in the 90+ age group, it comprised 79.5 percent of dementia cases, compared to 46.7 percent among those in their 70s.

The researchers also examined how education, gender, and APOE genotype were related to dementia. They found that the more years of education, the lower the risk of dementia. After controlling for education levels and age, they found no significant difference in dementia risk between males and females. As expected, they found that the presence of one or two APOE e4 alleles was linked with significantly higher risk of developing dementia.

To facilitate comparison of their findings with estimates from earlier studies using a lower minimum age, the researchers combined their estimates for ages 71 and over with those from other studies for ages 60 to 70. This resulted in an estimated total of 3.8 million people with dementia, including just over 2.5 million with Alzheimer's disease.

The only previous national estimate of dementia prevalence, obtained by extrapolating from regional samples, was 2.9 million, the researchers noted. "Our study finds that the prevalence of dementia is about 30 percent higher than this estimate," Langa said.

Four previous national estimates of the prevalence of Alzheimer's disease were all obtained by extrapolation from regional samples. These estimates ranged from 2.1 million to 4.5 million.

"What this study and others before it confirm is that there are millions of Americans living with Alzheimer's and dementia, and that number is



estimated to grow at an epidemic rate if we don't do something about it," said William Thies, vice president of Medical and Scientific Relations at the Alzheimer's Association. "The nation's leaders need to act now to advance research for effective treatments and provide care and support to those living with Alzheimer's."

"As the elderly population in the United States grows, the number of individuals with dementia will certainly increase tremendously," said U-M economist David Weir, who directs the ISR Health and Retirement Study. "Planning for the long-term care needs of this vulnerable population will become increasingly important. This new data, used along with related data from the Health and Retirement Study, should increase our nation's ability to successfully meet the needs of an aging U.S. population and those who love them."

Source: University of Michigan

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