

February 5, 2009  
Vol. 28 No. 9

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## How does one reach 100? Research team will work toward identifying determinants in NIH study

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News Office

The National Opinion Research Center will study why people live to be 100 years or older through a five-year grant from the National Institute on Aging.

Previous research has shown that a number of factors can lead to a person being two or three times more likely to live to extreme old age, said Leonid Gavrilov, Research Associate at the Center on Aging at NORC. The new project, "Biodemography of Exceptional Longevity in the United States," will build on that work, he said. Gavrilov and his wife Natalia, also a Research Associate at NORC, are co-investigators on the project.

"This project will investigate why some people manage to survive to extreme old age and help identify the biological and social correlates of exceptional longevity," Gavrilov explained. "We hope to find out the determinants of human longevity and to get insights into mechanisms and causes of long life.

"These are important issues, not only for demographic forecasts of human mortality and population aging, but also for improving our understanding of the fundamental mechanisms of human aging and longevity."

Centenarians are one of the most rapidly growing segments of the U.S. population, according to the National Institute on Aging. The number of centenarians is growing at a rate of 4.1 percent per year; the numbers increased 51 percent between 1990 and 2000.

The new study will take advantage of U.S. Census and Social Security Administration data, genealogies and military draft records. Gavrilov will look at early-life conditions, adult physical characteristics, and marriage and reproductive history on exceptional longevity.

Gavrilov and his wife have written extensively on extreme longevity. Their work has recently shown that longevity can be linked to a mother's age at her child's birth, birthplace within in the United States and family socioeconomic background.

Babies born to mothers under age 25 were twice as likely to live to 100 years of age, compared to infants born to mothers 25 or older. Farmers tend to outlive others, and men who fathered more than four children by the time they were 30 also live longer, research found.

The potential impact on exceptional longevity of early-life living conditions

shows that environmental and behavioral factors cannot be overlooked in longevity studies, Gavrilov said.

“Even the search for ‘human longevity genes’ could be facilitated when powerful confounding effects of childhood environment are taken into account,” he said.

Gavrilov will collaborate with researchers at the University of Pennsylvania, the University of Utah and the University of Wisconsin, Madison.

To read more about the Gavrilovs’ longevity studies, visit <http://longevity-science.org>.

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