

## **Supercentenarians**

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Being a woman clearly appears to be advantageous for living an exceptionally long life. Ninety-percent of those reaching the age of 115 were female. Image: Max Planck Society

(PhysOrg.com) -- The quest for the modern day Methuselah. A team of researchers tracked down the oldest of the old - people living beyond their 110th birthday.

An international research team has for the first time gathered a database of the oldest people in the world - those who lived beyond their 110th birthday. While searching for these "supercentenarians" and trying to find accurate documentation of their age, the researchers not only collected data for scientific purposes, but also documented the personal histories and wisdom of those who lived more than a century. They have now published their findings and the stories of many of their subjects in



the book "Supercentenarians," which was coordinated by the Max Planck Institute for Demographic Research (MPIDR) in Rostock/Germany.

How long can humans live? It's a natural question, but age researchers agree that it is now obsolete; there is no upper limit to life expectancy in sight. Scientific data shows that records are being broken every year. Today there is not only a dramatically increasing number of centenarians, but also more and more men and women who live to 110 years old or older - the supercentenarians.

"Investigating very old age has always been difficult for demographers," says Heiner Maier from the MPIDR. "Science has been plagued by myths and fairy tales." Most claims of modern day Methuselahs appear promising at first glance, but usually turn out to be unverifiable. Entries in the Guinness Book of World Records aren't reliable either; their validation is often based solely on documents provided by the families of those who reached an advanced age and are not independently confirmed by scientists.

Now, in an ambitious international effort, researchers in 15 nations have spent the last ten years searching their countries for people who reached the age of 110 or more. Together they found over 600 supercentenarians (in the USA, Canada, Japan, Australia, France, Italy, Spain, Germany, Switzerland, Belgium, the United Kingdom and in the Nordic countries). Of the 600, nearly 20 lived beyond 115.

The new data was used to create the International Database on Longevity (IDL), <a href="www.supercentenarians.org/">www.supercentenarians.org/</a>. "The IDL is the first reliable record of scientifically verified data about supercentenarians on an international scope", says Heiner Maier from the MPIDR. "It is the best existing account of mortality beyond the age of 110."



Finding the supercentenarians was an unusual task for the demographers, as they could not rely on standard statistical methods. In each country the scientists designed their own strategy of how to identify probable candidates of the super old, and then prove their age by locating official documents that confirmed their date of birth and date of death (or current age if still living).

But there were challenges. In the late 19th century, when the supercentenarians were born, many countries didn't have a central birth register, and often original documents were lost, misplaced or forgotten. So the scientists needed to search through a massive amount of certificates, census lists, death registers and the paper files of universities and health and security administrations to identify supercentenarians.

The findings varied between countries. In the United States 341 supercententarians were eventually found (309 women and 32 men), whereas in the much smaller country of Denmark only two women were verified as being over 110. In some cases going through all of the records would have been logistically impossible. In Germany, for instance, the researchers would have had to sort through records of roughly 8000 Residence Registry Offices. Luckily, however, researchers found a much faster method - they asked the Office of the German President for help. The President keeps a directory of residents older than 100 in order to send birthday congratulations. With the list in hand the researchers easily tracked down 17 supercentenarians.

The record holder in longevity is still the French woman Jeanne Calment, who died in 1997 at the age of 122. The book "Supercentenarians" celebrates her life - how she met the painter Vincent van Gogh when she was 13, how she later allowed herself one glass of port and one cigarette a day, and how she liked good food and wine, including cakes and chocolate, which she ate every day. When the



demographers James Vaupel and Bernard Jeune, two of the authors of "Supercentenarians," visited her at age 120, she remarked that the most important thing in her long life was that "I had fun. I am having fun."

Chris Mortensen's long life is also detailed in the book. Born in Denmark, he died at 115 in the United States. Still the record holder as the world's oldest living man, at his advanced age he still smoked cigars, and lived as long as the Dutch woman Hendrikje van Andel-Schipper. Despite being born prematurely with a weight of only three pounds, she nevertheless avoided major life-threatening diseases until her nineties, when she was diagnosed with a breast cancer, and ultimately died of stomach cancer. The African American woman Bettie Wilson who died at the age of 115 even survived a gall bladder surgery at age 114. And Elizabeth Bolden, also an African American woman, who was deeply religious and had ten great-great-great grandchildren, was allegedly completely mentally fit and was able to recount all the major details of her life on her 112th birthday.

What is striking is that many of the super old avoided dementia, at least until shortly before they died. Now researchers want to expand the use of the International Database on Longevity (IDL) and use its data to investigate mortality at advanced age and the reasons for an extra long life. But these reasons are still elusive. So far the only thing for certain is that being a woman is clearly advantageous, since ninety percent of those celebrating their 115th birthday were women. Having ancestors who lived exceptionally long played as little a role as economic background and half of the supercentenarians had no children. It is unclear, however, whether this evidence will remain constant with future supercentenarians. The search for the secret of super old age has only just begun.

**More information:** "Supercentenarians": free download - www.demogr.mpg.de/?books/drm/007/



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