



NEWSLETTER

Since 2006 almost 3,600 Americans and 1,250 Danes have been participating in the Long Life Family Study – a research project on longevity and healthy aging

Family members participating in the Long Life Family Study appear to live a long and healthy life. The overall purpose of this study is to gain insight into the behavioral and genetic mechanisms behind this phenomenon so that more people can experience healthy aging.

The aging process is slow, and changes are best identified over a period of several years. That is why we have contacted you by telephone or letter once a year to update the data we collect from you. We have been funded for a second in-person follow-up examination, which began in October 2014, so we will now be able to better examine the impact of genes and environment on longevity. This follow-up visit includes collecting updated and new information and is conducted by trained research assistants at the University of Pittsburgh, Boston University, Columbia University and the University of Southern Denmark.

Visit 2 Update

Since we began Visit 2 this past year, we have seen **681 people from across the United States and in Denmark**. Our Boston team has visited **260 people** (67 participants in the parent generation and 205 in the offspring generation). We have been contacting our participants in the order of oldest to youngest, so if you have not heard from us about scheduling your in-person visit, it will take us about 2 more years (through 2016) to contact and visit everyone! In the meantime, we will still be calling you every year to check in and ask you some questions.

All family members will be invited for our second follow-up visit, including those whose parent generation family members are no longer with us. The oldest generation was initially chosen because this allowed us to examine whether special genetic factors were of importance for healthy aging. It would have been optimal for us to have followed the parent generation siblings from as early as 40-50 years old to examine the actual aging processes. As this was not possible, our best approach was to examine individuals with greater chances of having a long life in good health – namely the children of these older siblings.

Additionally, spouses in both generations are essential for this follow-up study because they share environmental factors and not genes, this allows us to examine the influences of a healthy environment on successful aging. When combining information about the aging of the parents, their children and the spouses of participants, we can obtain knowledge about ways to enhance our chances of living a long and healthy life.



National Institute on Aging



What has the LLFS Study discovered so far?

Based on data we have been collecting since 2006, a number of studies have been carried out, and the findings from these analyses have recently resulted in more than 20 articles published in international, scientific journals. Below we have described some of our findings:

Memory and aging

We investigated the ability of the old members of the LLFS-families to maintain their intellectual capacity and also whether they have less risk of intellectual decline and of developing, for instance, Alzheimer's disease. Our results suggest that the intellectual capacity is better maintained in persons from families in which the members survived to very old ages, may indicate that genes play a role.

Personality

Can the nature of our personality contribute positively to a long lifespan? The "children generation" is generally less worried and more extroverted than the background population, but they do not differ from other people with regard to other personality traits. Overall, these results suggest that worrying less and having an extroverted personality can be of importance for living a very long life.

The importance of genes

Based on the blood samples that we collected during our first visit to our participants, we have carried our comprehensive analyses on the importance of genes for a long and healthy life. It seems that the genetic variants of importance differ among the families. Therefore, in the next phase of LLFS, we will focus on whether there are particular genetic variants within each family that have an influence on living a long life.

LLFS families including spouses have better health

Our study has shown that the LLFS-families and their spouses are healthier, have lower mortality, and, on average, have fewer chronic diseases than people the same age from other families. We have been able to demonstrate that the LLFS-families have lower incidence of tobacco-related cancers. This is in accordance with information from the LLFS-family members, who reported less smoking both now and previously compared with the Danish background population. The extraordinary survival among the Danish LLFS-families can thus in part be attributed to their health-related behavior.

Why do we want to continue the Long Life Family Study?

The changes that occur in humans as we age are of great importance. A long and healthy life can be characterized by an aging process that entails only minor declines in abilities.

We therefore want to replicate our original examination in order to follow the development, in both those who have maintained their good health and in those who have been less fortunate.

It is important to us that both groups are included so that we can gain a better understanding of the mechanisms behind achieving a long and healthy life.

For more information about the LLFS Study, which is funded by the National Institute on Aging of the National Institutes of Health, contact our research assistants at the Boston Field Center by toll-free telephone at 1-888-333-6327 ex. 1 or by email at stacy@bu.edu.

We look forward to visiting you and/or speaking to you soon!