

# Stay trim and have children to be 100

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If you want to live to a ripe old age of beyond 100, then take up farming, have lots of children and stay trim but not thin.

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That is the advice for men who want to live long lives, from the husband and wife team of Leonid Gavrilov and Natalia Gavrilova at the Centre on Aging, University of Chicago, who are about to present the results of a survey of centenarians they conducted to pinpoint how people can live a long and healthy life.

advertisement They used a random representative sample of 240 men born in 1887 who had survived to age 100, selected from the US Social Security Administration database.

These records of men with exceptional longevity were then linked by the couple in 171 cases to draft registration cards collected for the US military in 1917 when these men were 30 years old and put in broad categories of height and build.

Next week, they will tell the Gerontological Society of America meeting in San Francisco what they discovered. "This study provides the first estimates of height, body build and other vital characteristics for the future centenarian," they claim.

Randomly selected shorter-lived men matched with centenarian men by birth year, race and county of draft registration were used as controls so they could take account of confounding factors. They found that living beyond 100, which was only managed by around two or three in every 1000 born in America at that time, was linked with the following factors:

- **A trim figure, most of all.** Those in the 'stout' body build (being in the fattest 15 per cent of population) were less likely to make it to the age of 100. In fact, those who were obese at the age of 30 were almost three times less likely to become centenarians.

"Our findings that 'stout' body build predicts much lower survival rates to 100 years are generally consistent with the existing knowledge that particularly high body mass index and obesity are associated with increased mortality."

Dr Gavrilov said that the significance of body build is much higher than all other potentially important variables. But, there was a surprise. Current expectations are being thin would extend lifespan, based on studies of calorie restricted animals, which live up to 50 per cent longer.

But, he said, a 'slender' body build does not improve chances of reaching 100 years. "Some people are starving themselves because of the results of these experiments and our initial expectation was that thin people would live longer," he said.

"But it really does not do much, compared with medium body build. There is no need to suffer."

- **Farming seems to aid longevity.** "It is very good to be a farmer," said Dr Gavrilov. "This result is consistent with our previous findings suggesting that children raised on farms (boys in particular) had higher chances to become centenarians."

"Similar results were obtained by other authors who studied childhood conditions and survival to advanced ages and also found much stronger effects of farm childhood on longevity for men than women."

The new study looked at several occupational groups: white collar workers (clerks, bankers, and so on), blue collar skilled occupations (repair mechanics, machinists), services (grocers, barbers, salesmen) and unskilled occupations (labourers, kitchen hand, and so on). None "had a significant effect on attaining longevity in our study."

- **Having more than four children at the age of 30** significantly increased the chances of exceptional longevity, trebling the chance over average of reaching the age of 100.

"That was very interesting," said Dr Gavrilov, explaining that this contradicts the predictions of some theories of ageing, including the "disposable soma theory" which suggests that human longevity must come with a cost of impaired reproduction, because both require energy, and therefore compete with each other.

That view seemed to be backed by a study of British aristocracy which showed that those who had a long life had fewer children and many were childless.

"We expected that a lot of children would not be good for longevity, also because of the economic burden," said Dr Gavrilov. "But we found quite the opposite, which was quite a surprise." Perhaps they help people live long because children "care for you when you are old," he said. And it could be that having many children is a general marker of good health.

Thus, Dr Gavrilov concluded: "avoid being stout, be a farmer, have more children by age 30." But he added one caveat - that this recipe for long life worked in America a century ago. "Nobody knows whether it will work now, when the life circumstances have changed so dramatically. We may need to wait another 100 years to find this out."

The effects of immigration status, marital status, and height on longevity were statistically insignificant in boosting the chance of receiving a telegram from the Queen.

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