

Children of long-lived parents less likely to get cancer

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Protective effects are passed on from parents who live past 65. Image via Shutterstock.

(Medical Xpress)—The offspring of parents who live to a ripe old age are more likely to live longer themselves, and less prone to cancer and other common diseases associated with ageing, a study has revealed.

Experts at the University of Exeter Medical School, supported by the National Institute for Health [Research Collaboration](#) for Leadership in Applied [Health Research](#) and Care in the South West Peninsula (NIHR PenCLAHRC), led an [international collaboration](#) which discovered that

people who had a long-lived mother or father were 24% less likely to get cancer. The scientists compared the children of long-lived [parents](#) to children whose parents survived to average ages for their generation.

The scientists classified long-lived mothers as those who survived past 91 years old, and compared them to those who reached average age spans of 77 to 91. Long-lived fathers lived past 87 years old, compared with the average of 65 to 87 years. The scientists studied 938 new cases of cancer that developed during the 18 year follow-up period.

The team also involved experts from the National Institute for Health and Medical Research in France (Institut national de la santé et de la recherche médicale), the University of Michigan and the University of Iowa. They found that overall mortality rates dropped by up to 19 per cent for each decade that at least one of the parents lived past the age of 65. For those whose mothers lived beyond 85, [mortality rates](#) were 40 per cent lower. The figure was a little lower (14 per cent) for fathers, possibly because of adverse lifestyle factors such as smoking, which may have been more common in the fathers.

In the study, published in the *Journals of Gerontology: Series A*, the scientists analysed data from a series of interviews conducted with 9,764 people taking part in the Health and Retirement Study. The participants were based in America, and were followed up over 18 years, from 1992 to 2010. They were interviewed every two years, with questions including the ages of their parents and when they died. In 2010 the participants were in their seventies.

Professor William Henley, from the University of Exeter Medical School, said: "Previous studies have shown that the children of centenarians tend to live longer with less heart disease, but this is the first robust evidence that the children of longer-lived parents are also less likely to get cancer. We also found that they are less prone to

diabetes or suffering a stroke. These protective effects are passed on from parents who live beyond 65 – far younger than shown in previous studies, which have looked at those over the age of 80. Obviously children of older parents are not immune to contracting cancer or any other diseases of ageing, but our evidence shows that rates are lower. We also found that this inherited resistance to age-related diseases gets stronger the older their parents lived."

Ambarish Dutta, who worked on the project at the University of Exeter Medical School and is now at the Asian Institute of Public Health at the Ravenshaw University in India, said: "Interestingly from a nature versus nurture perspective, we found no evidence that these health advantages are passed on from parents-in-law. Despite being likely to share the same environment and lifestyle in their married lives, spouses had no health benefit from their parents-in-law reaching a ripe old age. If the findings resulted from cultural or [lifestyle factors](#), you might expect these effects to extend to husbands and wives in at least some cases, but there was no impact whatsoever."

In analysing the data, the team made adjustments for sex, race, smoking, wealth, education, body mass index, and childhood socioeconomic status. They also excluded results from those whose parents died prematurely (ie mothers who died younger than 61 or fathers younger than 46).

The study could not look at the various sub groups of cancer, as numbers did not allow accurate estimates. This study was carried out in preparation for a more detailed analysis of factors explaining why some people seem to age more slowly than others. Future work will use the UK Biobank, which analyses a cohort of 500,000 participants.

Other collaborators on the paper were Dr Jean-Marie Robine, of the Institut National de la Santé et de la Recherche Médical, Dr Kenneth

Langa of the University of Michigan, Professor Robert Wallace of the University of Iowa and Professor David Melzer, of the University of Exeter Medical School.

More information: biomedgerontology.oxfordjournals.org/

Provided by University of Exeter

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