

# Childhood illness not linked to higher adult mortality

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A new biological study by the University of Stirling has found that exposure to infections in early life does not have long-lasting consequences for later-life survival and reproduction.

In the UK 150 years ago, a 20-year-old could be expected to live to age 60; nowadays, a 20-year-old is expected to live to over 80. Why has adult lifespan increased so much during the last 150 years?

Previous research suggested that diseases which used to be common in childhood, such as smallpox, measles and whooping cough caused long-lasting inflammation, which then increased the risk of [cardiovascular disease](#) in adulthood and resulted in an [early death](#).

Experts thought that since the introduction of vaccines and eradication of these diseases, children rarely get these illnesses anymore and do not experience long-lasting inflammation, and as a result, are living longer.

However, if this was the case, we would expect infections in childhood to be linked to early death from heart disease, stroke and cancer.

Now evolutionary ecologists at the University of Stirling and University of Turku, Finland, found no support for the idea that exposure to infections in [early life](#) can result in higher mortality risk during adulthood.

Lead researcher, Adam Hayward, Impact Research Fellow at the

University of Stirling, said:

"Our analyses are significant because they show that early-life disease exposure was not linked to increased risk of death in later life. It was also not linked to risk of death specifically from [heart disease](#), stroke and cancer and was not related to age at first birth, number of children born, or child survival rate in either men or women.

"Overall, we found no support for the idea that exposure to infections in early life can have long-lasting consequences for later-life survival and reproduction. Instead, it appears more likely that improved conditions during adulthood, such as healthcare and diet, are responsible for recent increases in adult lifespan."

Researchers used data from church records on births, marriages and deaths collected in seven parishes in Finland. The 7,283 men and women studied were born between 1751 and 1850, a period before the introduction of effective medicine and contraception.

Each person was scored on their likely exposure to disease in early life based on child deaths from infections that occurred during their childhood. If a child was born at a time when a high proportion of children died of infectious diseases, it was assumed that they themselves had higher exposure to disease. Researchers analysed how an individual's early disease exposure was linked to their survival, deaths from cardiovascular [disease](#), and their fertility.

Provided by University of Stirling

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