## Children born during the great depression aged rapidly later in life. Here's how trauma can affect you before you're even born

The worst recession in US history shaped how well people would age — before they were even born. Researchers have found that the cells of people who were conceived during the Great Depression, which lasted from 1929 to 1939 and, at its height, saw about 25% of the US workforce unemployed, show signs of accelerated ageing.

The study authors measured these changes in the cells' epigenome — the collection of chemical markers attached to DNA that determines when, where and by how much genes are expressed in each cell. And they think the pattern of markers that they uncovered could be linked to higher rates of both chronic illness and death.

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The work, published on 8 November in the <u>Proceedings of the National Academy of Sciences</u>, adds to a cache of studies indicating that exposure to hardship such as stress and starvation during the earliest stages of development can shape human health for decades. The findings highlight how social programmes designed to help pregnant people could be a tool for fighting health disparities in children, says co-author Lauren Schmitz, an economist at the University of Wisconsin–Madison.

Although the study is far from the first to link big historical events to changes in the epigenome, the fact that the signal appears in data collected from people in their seventies and eighties is "mind-blowing", says Patrick Allard, an environmental epigeneticist at the University of California, Los Angeles.

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