

Epigenetic inheritance: Holocaust survivors passed genetic marks of trauma to children

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Genetic changes stemming from the trauma suffered by Holocaust survivors are capable of being passed on to their children, the clearest sign yet that one person's life experience can affect subsequent generations.

The conclusion [from a research team at New York's Mount Sinai hospital](#) led by Rachel Yehuda stems from the genetic study of 32 Jewish men and women who had either been interned in a Nazi concentration camp, witnessed or experienced torture or who had had to hide during the second world war.

They also analysed the genes of their children, who are known to have increased likelihood of stress disorders, and compared the results with Jewish families who were living outside of Europe during the war. "The gene changes in the children could only be attributed to Holocaust exposure in the parents," said Yehuda.

Her team's work is the clearest example in humans of the transmission of trauma to a child via what is called "epigenetic inheritance" – the idea that environmental influences such as smoking, diet and stress can affect the genes of your children and possibly even grandchildren.

Other studies have proposed a more tentative connection between one generation's experience and the next. For example, girls born to Dutch women who were pregnant during a severe famine at the end of the second world war had an above-average risk of developing schizophrenia. Likewise, [another study](#) has showed that men who smoked before puberty fathered heavier sons than those who smoked after.

Read full, original post: [Study of Holocaust survivors finds trauma passed on to children's genes](#)