

# Schizophrenia genes increase chance of IQ loss

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People who are at greater genetic risk of schizophrenia are more likely to see a fall in IQ as they age, even if they do not develop the condition.

Scientists at the University of Edinburgh say the findings could lead to new research into how different genes for schizophrenia affect [brain function](#) over time. They also show that genes associated with schizophrenia influence people in other important ways besides causing the illness itself.

The researchers used the latest [genetic analysis](#) techniques to reach their conclusion on how thinking skills change with age.

They compared the IQ scores of more than 1,000 people from Edinburgh who were tested for general cognitive functions in 1947, when the subjects were aged 11, and again when they were around 70 years old.

The researchers were able to examine people's genes and calculate each subject's genetic likelihood of developing schizophrenia, even though none of the group had ever developed the illness.

They then compared the [IQ scores](#) of people with a high and low risk of developing schizophrenia. They found that there was no difference at age 11, but people with a greater [genetic risk](#) of schizophrenia had slightly lower IQs at age 70.

Those people who had more genes linked to schizophrenia also had a greater estimated fall in IQ over their lifetime than those at lower risk.

Ian Deary, Director of the University of Edinburgh's Centre for Cognitive Ageing and Cognitive Epidemiology, who led the research team, said: "Retaining our thinking skills as we grow older is important for living well and independently. If nature has loaded a person's genes towards schizophrenia, then there is a slight but detectable worsening in cognitive functions between childhood and old age."

Andrew McIntosh, of the University of Edinburgh's Centre for Clinical [Brain Sciences](#), said: "With further research into how these genes affect the brain, it could become possible to understand how genes linked to schizophrenia affect people's cognitive functions as they age."

**More information:** The study is published in the journal *Biological Psychiatry*.

Provided by University of Edinburgh

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