

# Evidence of familial vulnerability for epilepsy and psychosis

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Although the two disorders may seem dissimilar, epilepsy and psychosis are associated. Individuals with epilepsy are more likely to have schizophrenia, and a family history of epilepsy is a risk factor for psychosis. It is not known whether the converse is true, i.e., whether a family history of psychosis is a risk factor for epilepsy.

Multiple studies using varied investigative techniques have shown that patients with schizophrenia and patients with epilepsy show some similar structural brain and [genetic abnormalities](#), suggesting they may share a common etiology.

To investigate this possibility, researchers conducted a population-based study of parents and their children born in Helsinki, Finland. Using data available in two Finnish national registers, the study included 9,653 families and 23,404 offspring.

Individuals with epilepsy had a 5.5-fold increase in the risk of having a [psychotic disorder](#), a 6.3-fold increase in the risk of having bipolar disorder, and an 8.5-fold increase in the risk of having [schizophrenia](#).

They also found that the association between epilepsy and psychosis clusters within families. Individuals with a parental history of epilepsy had a 2-fold increase in the risk of developing psychosis, compared to individuals without a parental history of epilepsy. Individuals with a parental history of psychosis had a 2.7-fold increase in the risk of having a diagnosis of epilepsy, compared to individuals without a parental

history of psychosis.

There have been multiple theories regarding the link between epilepsy and psychosis, but most have been predicated on the idea that epilepsy has toxic effects on the brain. However, combined with prior genetic and neurodevelopmental evidence, these new findings suggest a much more complex association, which likely includes a shared [genetic vulnerability](#).

"Our evidence that epilepsy and [psychotic illness](#) may cluster within some families indicates that these disorders may be more closely linked than previously thought. We hope that this epidemiological evidence may contribute to the on-going efforts to disentangle the complex pathways that lead to these serious illnesses," said Dr. Mary Clarke, first author of the study and lecturer at Royal College of Surgeons in Ireland.

Dr. John Krystal, Editor of *Biological Psychiatry*, commented: "We have long known that particular types of epilepsy were associated with psychosis. However, the finding that a parental history of psychosis is associated with an increased risk of [epilepsy](#) in the offspring strengthens the mechanistic link between the two conditions."

**More information:** *Biological Psychiatry* [doi: 10.1016/j.biopsych.2012.01.011](#)

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