



# Schizophrenia: genetic evidence

## This activity will help you to...

- Understand evidence relating to genetic factors in schizophrenia.
- Interpret data from genetic studies of schizophrenia
- Comment on the implications of data from such studies
- Evaluate the genetic hypothesis of schizophrenia

## What conclusions can we draw?

### Distribution of occurrence

The disorder is represented in all cultures (be they primitive or industrial, permissive or strict, 1920's or 1980's) at a rate of about one or two percent.

### Family history studies

In cases in which one member of a monozygotic twin pair has schizophrenia, there is a 46% chance that the other member also suffers from schizophrenia. Thus, in about one half of the cases, one of the twins does not develop schizophrenia, even though the genetic makeup is identical; but pathology is still the norm, since only about 13% are judged to be normal. Dizygotic or fraternal twins, like siblings, share about one half of the genetic information. When a sibling or one member of a fraternal twin pair has been diagnosed as having schizophrenia, the other member bears about a 10-15% chance of being afflicted with the disease. Similarly, the child of a schizophrenic parent has a likelihood of becoming schizophrenic that is about 15 times that of the general population.

### Adoption data

Studies of schizophrenic patients who were adopted have found that the likelihood of developing schizophrenia is more predictable based on the mental health of the biological mother than on that of the foster mother.

All excerpts are from Timmons, C.R. & Hamilton, L.W. (1990), 'Principles of behavioral pharmacology'. New Jersey: Prentice-Hall