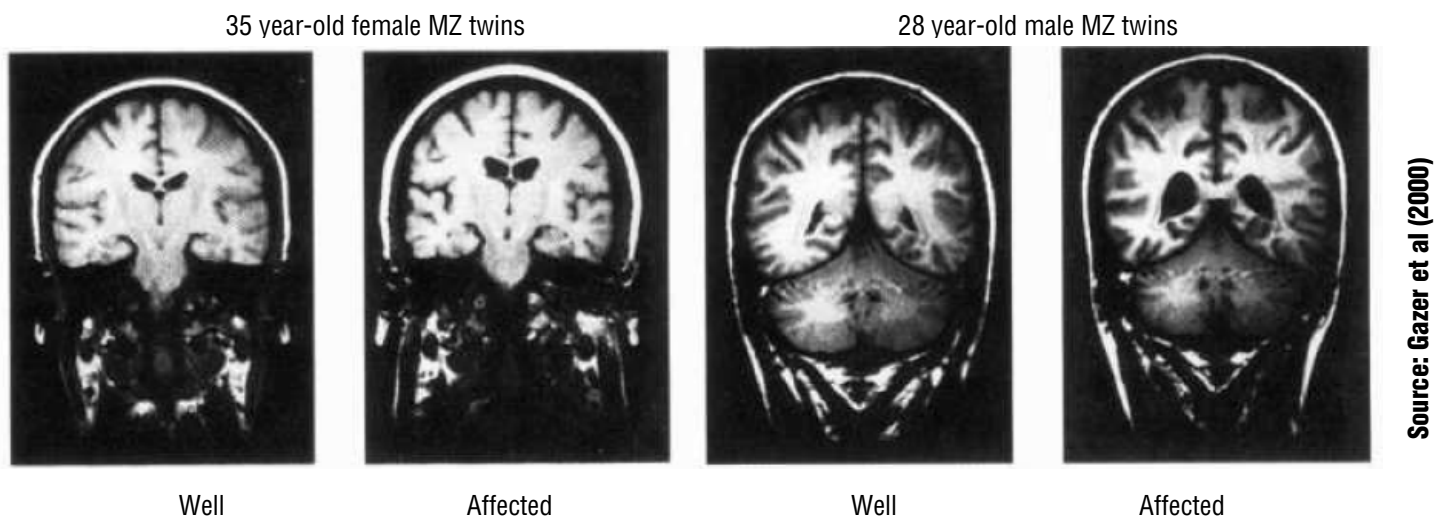


Schizophrenia: biological evidence

This activity will help you to...

- Understand some biological hypotheses about schizophrenia
- Interpret biological evidence about schizophrenia
- Draw some conclusions about the role of biological factors in schizophrenia

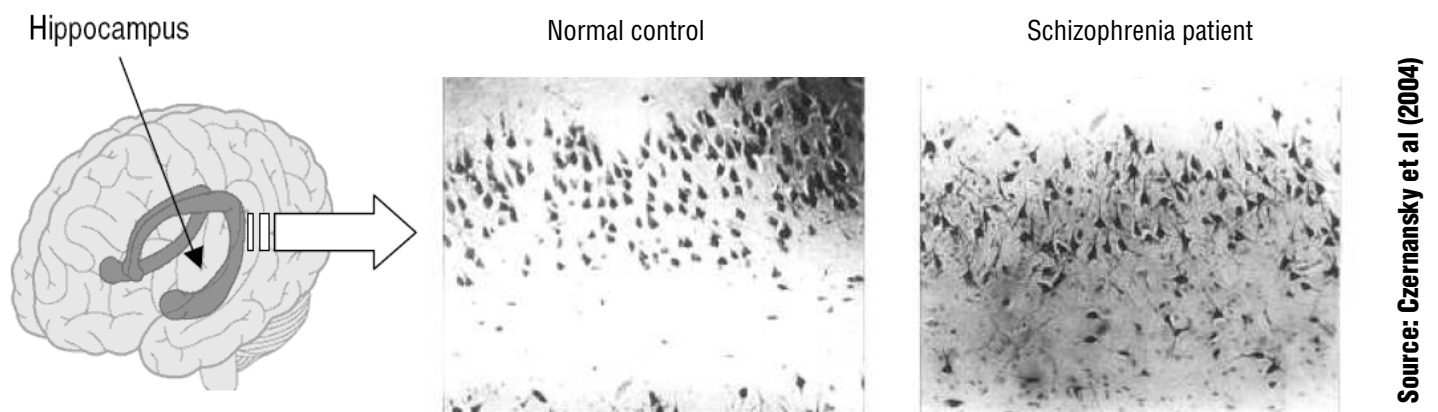
Brain structure: MRI scans



MRI scans give detailed picture of the structure of the brain. Here we can see comparisons of the brains of two pairs of identical twins. One of each twin pair has schizophrenia.

- **What differences can you see?**
- **What might these differences indicate?**

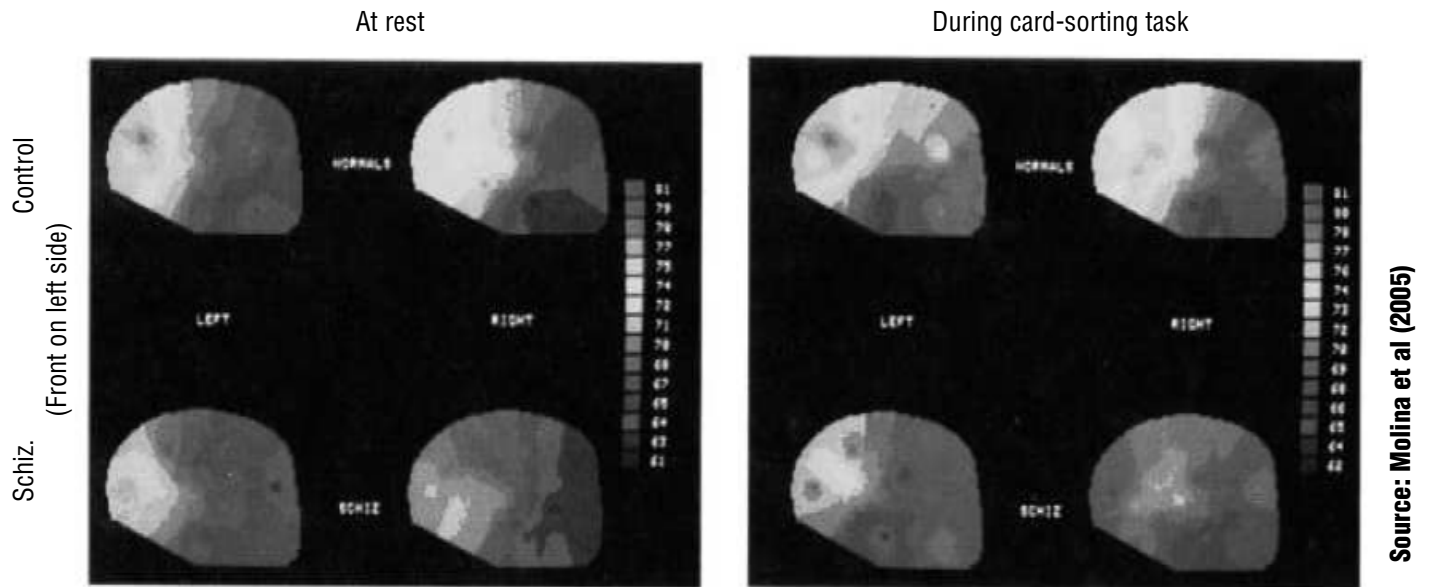
Brain structure: microscopic examination



These images compare brain matter samples from the hippocampus of a schizophrenia patient with a clinically normal control. The neuronal bodies have been stained to make them visible.

- **How do the two samples differ?**
- **When might this difference first have emerged?**

Brain functioning: functional MRI scans



A functional MRI scan does not reveal as much detail as a conventional MRI. However, it is able to show activity in different regions of the brain, which a conventional MRI scan can not. These pictures compare the level of brain activity in a schizophrenia patient and a clinically normal control both at rest and during a cognitively demanding task. Brain activity is higher in the lighter coloured areas.

- **How does brain activity differ between the patient and the control?**
- **What consequences might this have for the person with schizophrenia?**

Summary of main conclusions