

# Genetic Factors in Anorexia



This activity will help you to:

- Interpret data from genetic studies
- Assess the view that anorexia is a biological disorder

## How can we tell if a psychological disorder is genetic?

### Family History Studies

We inherit our genes from our parents, and members of the same family have similar genetic profiles. For this reason, disorders with a genetic component tend to run in families. Following from this, if eating disorders are influenced by genetics, we would expect to find that people closely related to anorexics would have a higher chance of getting it themselves.

**Strober & Humphrey (1987)** found that relatives of eating disorder patients were between four and five times more likely than members of the general population to develop an eating disorder themselves.

What does this finding suggest?

Bearing in mind what the behavioural model of abnormality suggests, does this finding necessarily mean that eating disorders are partially inherited? Explain your answer.

### Twin Studies

There are two sorts of twin. A monozygotic (MZ or identical) twin pair have exactly the same genes, whereas a dizygotic (DZ or non-identical) twin pair share only about 50% of their genetic material. If a disorder is completely genetic, then if one half of an MZ twin pair gets it, then the other is guaranteed to. In other words, the **concordance** or similarity between the twins for getting the disorder is 100%. On the other hand, if one half of a DZ twin pair gets a genetic disorder, then the other only has a 50% chance of getting it (the concordance is 50%). However, both MZ and DZ twins have highly similar environments – both halves of the twin pair receive the same environmental influences and learning experiences. This means that if we compare concordance rates for anorexia in MZ and DZ twins:

- If we find that **MZ concordance is 100%** and DZ concordance about 50% then the disorder is likely to be wholly genetic.
- If **MZ concordance is significantly less than 100%**, then although genes might play a role, the environment must play a part too.

