

## Autism is largely down to genes, twins study suggests

**By Michelle Roberts** Health editor, BBC News online

Individuals with autism have less activity in the amygdala (shown in red), which plays a key role in processing emotions



Genetic influences on autism are estimated to be between 74-98%, a Medical Research Council study of 258 twins suggests.

The King's College London team said 181 of the teenagers had autism, but the risk was far higher in identical twins where one twin had autism, as they share the same DNA.

The researchers told [JAMA Psychiatry](#) that hundreds of genes were involved.

But they do not rule out environmental factors.

Both twins in each pair had been raised by their parents in the same household.

“Some parents are concerned whether things like high pollution might be causing autism” Dr Francesca Happé Researcher

## Increased awareness

Autism can be tricky to diagnose. It is a spectrum of conditions rather than a single disorder, and its severity can vary widely from person to person.

Researcher Dr Francesca Happé said, although not perfect, all the evidence pointed to genes playing a bigger role in autism than previously thought.

"Our findings suggest environmental factors are smaller, which is important because some parents are concerned whether things like high pollution might be causing autism.

"Some people think there might be a big environmental component because autism has become more common in recent years but that's happened too fast for genetics to be a probable cause.

Autism is a highly complex story of genes not only interacting with other genes but with non-genetic factors too”

**Dr Judith Brown National Autistic Society**

**"The main consensus now is that the rise in diagnosis has more to do with increased awareness of the condition."**

## **Full lives**

Dr Happe said what might have been labelled as a learning disability in the past was now being correctly diagnosed as autism.

She said lots of scientists were working to determine which precise genes were involved in autism and whether they were inherited.

"There may be perhaps hundreds of genes that contribute to autistic traits," she said.

Dr Judith Brown, of the National Autistic Society, said: "Autism is a highly complex story of genes not only interacting with other genes, but with non-genetic factors too.

"This large population-based twin sample is significant because it helps us to understand much more about the role genetics play in autism and opens up the possibility of whole families gaining a better understanding of a condition they may share.

"However, we are still a long way from knowing what leads to autism.

"What people with condition, their families and carers need most of all is access now to the right kind of support to be able to lead full lives."