Scientists discover dyslexia gene

Up to a fifth of dyslexia cases could be caused by a faulty version of a gene called DCDC2, scientists believe.

Up to one in 10 people has dyslexia

In the mutant form, DCDC2 leads to a disruption in the formation of brain circuits that make it possible to read, say the Yale team.

Their finding could lead to earlier diagnosis of dyslexia, meaning educational programmes for dyslexic children could be started earlier.

The work is published in Proceedings of the National Academy of Science.

The gene is located on chromosome six and Dr Jeffrey Gruen and his team at Yale School of Medicine believe it causes as many as 20% of dyslexia cases.

> **"We now have strong statistical evidence that a large number of dyslexic cases - perhaps as many as 20% - are due to the DCDC2 gene"**
>
> Researcher Dr Jeffrey Gruen

Dyslexia covers a range of types of learning difficulty where someone of normal intelligence has persistent and significant problems with reading, writing, spelling.

Up to six million Britons are believed to have dyslexia - 4% of the population is severely dyslexic and a further 6% have limited problems.

Other genes have already been linked to dyslexia.

Dr Gruen and his team studied 153 families with members who had dyslexia.

By comparing specific DNA markers they found many of the people with dyslexia were missing a large portion of genetic material in the DCDC2 gene.

Dr Gruen said; "The gene itself is expressed in reading centres of the brain where it modulates migration of neurons. This

very architecture of brain circuitry is necessary for normal reading.

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- perhaps as many as 20% - are due to the DCDC2 gene."

They said it was likely that many other genes were also involved in dyslexia - some already discovered and some still to be discovered.

more likely dyslexic people are to acquire the skills required to reach their full potential

A spokeswoman from the British Dyslexia Association

Scientists at Karolinska Institute, working alongside a team of researchers from Finland, have identified a new gene on chromosome 3, called ROBO1, that appears to be associated with dyslexia.

Their study is due to appear in the scientific journal PLoS Genetics.

A spokeswoman from the British Dyslexia Association said: "Even though dyslexia is unlikely to be a single gene disorder this new knowledge could lead to earlier identification of this learning difference.

"Our research has shown that the earlier dyslexia friendly teaching practices are implemented, the more likely dyslexic people are to acquire the skills required to reach their full potential."

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