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Scientists identify 40 genes that shed light on biology of intelligence

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Researchers have made a major advance in understanding the genetic underpinnings of intelligence by uncovering 52 genes of the trait, 40 of which are new discoveries.
They also found that many people with these genes are likely to have other traits, including being tall, thin and unlikely to smoke.

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"For the first time, we were able to detect a substantial amount of genetic effects in IQ," Danielle Posthuma, a researcher at the Center for Neurogenomics and Cognitive Research in Amsterdam was reported telling to the journal Nature Genetics.

An international research team led by Vrije Universiteit Amsterdam studied genetic data from over 78,000 individuals. The data included information on DNA genotypes and intelligence scores, which led the team to discover new genes and biological routes for intelligence.

Despite high heritability estimates of 45 per cent in childhood and 80 per cent in adulthood, until now, only a few genes had been associated with.

But the new study uncovered 40 new genes, most of which are mainly expressed in brain tissue. The results showed that people with the genes were more likely to have high educational achievements, and were also likely to be taller, not to smoke, and to have autism spectrum disorder.

In contrast, people with the intelligence genes were less likely to have Alzheimer's disease, depressive symptoms, smoking history, schizophrenia, high body mass index, or obesity.

The researchers stress that future studies will be needed to clarify the exact role of these genes in intelligence in order to gain a more complete picture of how genetic differences lead to differences in intelligence.