A novel gene linked with ADHD

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A link between ADHD and the Latrophilin 3 gene (LPHN3) has been discovered, reports a study online this week in *Molecular Psychiatry*. The same LPHN3 gene variant is also associated with response to stimulant medication, which could potentially help identify those who would respond
positively to this treatment and lead to the future development of more effective drug treatments for ADHD.

To investigate the genetic causes of ADHD, Maximilian Muenke, Mauricio Arcos-Burgos and colleagues conducted a genome-wide linkage study of 18 ADHD-afflicted families in an isolated population in Colombia. The results showed an association between ADHD and a genome region in LPHN3. The team replicated these results in five population samples from other areas of the world, including Germany, Norway, Spain, and two from the U.S. Brain imaging studies further confirmed this connection, showing LPHN3 variants are expressed in brain regions related to attention and activity and are associated with response to stimulant medication.

The link between ADHD and LPHN3 suggests new molecular mechanisms related to ADHD, which could assist the development of drug treatments that target new genes and neural pathways. The connection between LPHN3 and response to stimulant medication could help identify those susceptible to ADHD and those more likely to respond positively to stimulant medication as a treatment.

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