

What's behind unexplained epilepsy in kids? A gene test may tell

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(HealthDay)—Genetic testing can help guide management and treatment

of unexplained epilepsy in children, new research suggests.

"A genetic diagnosis impacted [medical management](#) for nearly three out of four children in our study," said study author Dr. Isabel Haviland. She's a postdoctoral research fellow in neurology/neurobiology at Boston Children's Hospital and Harvard Medical School.

In the study, Haviland's team examined the medical records of 152 children with epilepsy who were tested between 2012 and 2019 at one U.S. institution and received a genetic diagnosis.

For 72% of the children, [genetic testing](#) affected at least one of four areas of management of their condition: care coordination, meaning they were referred to specialists and/or for [diagnostic testing](#) because of [health issues](#) related to the genetic finding (48%); treatment (45%); prognosis, or outlook for the course of their epilepsy (28%); and diagnosis (1%).

Among the children whose treatment was affected by genetic testing: 36% had an impact on anti-seizure medication choice; 10% were eligible for gene-specific clinical trials or experimental drug use; 7% were started on gene-specific vitamin or metabolic treatments, such as the ketogenic diet; and 3% were treated with a drug not yet approved for their type of epilepsy.

The findings were presented Friday at the American Epilepsy Society annual meeting, in Chicago. Research presented at meetings should be considered preliminary until published in a peer-reviewed journal.

"We found the impact of a [genetic diagnosis](#) was even higher in children whose epilepsy began before they turned 2 years old," Haviland said in a meeting news release.

"About two-thirds of pediatric epilepsy is unexplained, and genetic testing should be offered in these cases because of the significant potential impact on management, including on clinical treatment and eligibility for clinical studies," Haviland suggested.

Changes in treatment can make a significant difference for a child with epilepsy, according to Haviland. For example, vitamin B6 is important for [brain development](#) but some genetic disorders affect its pathway in the brain. Supplements or related vitamins may partially correct the problem and treat the epilepsy.

"Genetic testing should be part of the standard evaluation of children with unexplained epilepsy," Haviland concluded.

More information: The American Academy of Pediatrics has more on [epilepsy](#).

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