Form of Gene Can Boost Chances of Autism

By Susan Abram
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LOS ANGELES -- In what one scientist called the most powerful study of autism to date, researchers have discovered that the presence of a certain form of a gene can increase a child's risk of developing autism.

Scientists at the University of California, Los Angeles, said they have isolated a trend among the DNA of 1,046 members of families with at least two sons affected by autism, who share a common variant or subtle change of a gene.

It's still unclear how the gene contributes to autism, and scientists cautioned that its presence in itself does not cause the disorder.

But the research, published in the journal Molecular Psychiatry recently, continues to build on other findings that suggest heredity plays an important role in determining who develops autism and that the variant occurs more frequently in boys.

"I'd say overall we're closer to understanding that autism is going to be largely genetic, but it's also quite complex, so we're filling in very small pieces of the puzzle," said Dr. Stanley Nelson, professor of human genetics and psychiatry at UCLA and the lead author of the study.

"It's a real genetic finding, but it's a minor impact," he said. "There may be potentially hundreds of genes contributing to the risk."

Nearly 40 percent of the general population carries this variant, but not all develop autism, which is why it's important to consider other factors, such as how other genes interact, as well as the environment.

"The exciting thing to me about this study is it gives us small glimpses of how the human brain developes," Nelson said.

It has been estimated that one in 150 of the nation's children have at least one disorder on the autism spectrum. Autism is described as a complex disorder

characterized by an inability to socialize, and is accompanied by behavioral challenges.

It's unclear why boys are four times more often than girls to have autism, and are more likely to have Asperger's syndrome, a milder form on the spectrum, Nelson said.

"We don't know why it's so much more common in boys, but clearly there's something in the make up," Nelson said.

Nelson and his team were able to conduct the study using DNA samples and data provided by families who donated blood to the Los Angeles-based Autism Genetic Resource Exchange, a program created and funded by Cure Autism Now.

Former Winnetka residents Robert and Pilar Dowell participated in the exchange because their twin sons, now 11, and a third son, now 7, were all diagnosed with autism.

Pilar Dowell said she was glad to participate, but each discovery raises new questions.

"I'm glad they are isolating what could be causing so many children to have autism, but I can't help but have a sense of responsibility," Pilar said.

Nothing in the research suggests only women pass on the gene, but Pilar wonders if she is the carrier, since her sister also has one son with autism and another with Asperger's.

"If you know it's part of your DNA, will you have children?" Pilar said. "It raises a moral dilemma."

Experts in the autism community called the finding important, but more parents also want more support in how to understand their children, said Dr. Elizabeth Laugeson, director of the The Help Group -- UCLA Autism Research Alliance.

The alliance was launched two years ago and has received funding for eight different studies that include sending UCLA researchers into classrooms. The

Help Group operates several schools in the Valley.

"We're sort of a living laboratory, trying to develope and better understand language, social skills and help decrease social anxiety," Laugeson said.

Meanwhile, Nelson said he hopes more parents will participate in the Interactive Autism Network,so that research can continue.

"It's one of the means we have to recruit and grow a much larger population of kids and their families, to find the genetic risks," Nelson said.