Parents of children with autism often have autistic traits
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"When there was a child with autism in the family, both parents more often scored in the top 20 percent of the adult population on a survey we use to measure the presence of autistic traits," said one of the lead researchers, John N. Constantino, MD, the Blanche F. Ittleson Professor of Psychiatry and Pediatrics.

"It could be that a mother or a father is just a little bit repetitive or slightly overfocused on details," Constantino explained. "We can measure the presence of those traits with our questionnaire, but higher scores don't mean a parent has problems. In fact, there may be advantages to having some of those traits. The problem comes when those traits are so intense that they begin to impair a person's ability to function."

Just as an adequate amount of mashed potatoes and gravy won't take over a dinner plate—but too much may end up spilling over into everything else on the plate—with autistic traits, too large a "helping" of particular traits can have a negative influence on a child's behavior and social skills.

Constantino, director of the William Greenleaf Eliot Division of Child and Adolescent Psychiatry at Washington University and psychiatrist-in-chief at St. Louis Children's Hospital, said the traits related to autism tend to be natural variations in social skills.

The researchers analyzed data from 256 children with diagnoses of autism and almost 1,400 children who did not have the disorder. Data from more than 1,200 mothers and 1,600 fathers of the children also were included in the analysis.

All of the subjects were part of the Nurses' Health Study II, which has been gathering health information from more than 116,000 nurses since 1989.

Kristen Lyall, ScD, and her colleagues at the

Quinn, an autistic boy, and the line of toys he made before falling asleep. Repeatedly stacking or lining up objects is a behavior commonly associated with autism. Credit: Wikipedia.
Harvard School of Public Health used the Social Responsiveness Scale (SRS) to measure the presence of autistic traits. The SRS is a tool that was developed by Constantino.

People who score less than 59 on the SRS are considered normal and healthy.

When both parents had mild elevations in SRS scores, the study indicated that they were 85 percent more likely than parents without elevated scores to have a child with an autism spectrum disorder. If only one parent's SRS score was high, the likelihood of having a child with autism spectrum disorder increased by 53 percent. And even among children without autism diagnoses, elevated parent scores correlated with higher SRS scores in their children.

It might seem uncommon that couples with high levels of autistic traits would get together and have children, but when one parent scores high for autistic traits, it's likely the other parent will, too.

"It turns out that people tend to select one another on the basis of many of the same traits that the SRS measures," Constantino said. "Likes attract. If one person has a high score, he or she is more likely to partner with another person who also scores high."

That's likely to raise the chances that their offspring will have elevated scores.

"When both parents have scores at or above the top 20 percent, the child's score is 20 to 30 points higher than when neither parent has an elevated SRS score," he explained.

To better understand how the genetic risks for autism are transmitted from parents to children—and what might protect some individuals in a family from experiencing clinical impairment even when they inherit the same risk factors—Constantino and his colleagues are conducting studies involving molecular, neuroimaging and behavioral methods to trace autism susceptibility across generations in families.

More information: Lyall K, Constantino JN,