

NEWS

Having smart father raises child's risk of autism

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Children whose fathers are highly intelligent are at a 31 percent higher risk of autism than those whose fathers are of average intelligence, according to unpublished results presented today at the **2017 International Meeting for Autism Research** in San Francisco, California.

The work supports observations that date back to the 1940s, when **Leo Kanner** and Hans Asperger noted in separate reports that the fathers of children with autism tended to be highly intelligent and in several cases worked in technical fields. A 2012 study also showed that children from regions in the Netherlands where high-tech jobs are prevalent are more likely to have autism than those who live in other regions.

In the new study, lead investigator **Renee Gardner**, assistant professor at Karolinska Institutet in Stockholm, set out to investigate whether the historical lore has validity. She and her colleagues matched medical records for 309,803 children whose fathers were conscripted into the Swedish military with their father's scores on the technical portion of the Swedish intelligence quotient (IQ) test.

They found a one-third higher risk of autism in children whose fathers' IQ scores are 111 or higher than in those whose fathers' scores cluster around 100. The researchers controlled for possible confounding factors such as families' socioeconomic status and parental age, education level and history of inpatient psychiatric treatment.

IQ indicators:

They found the opposite relationship between a father's IQ and his child's chances of having intellectual disability or attention deficit hyperactivity disorder (ADHD). In particular, children of men with an IQ of 75 or below had a four-and-a-half times higher risk of intellectual disability. The chance of ADHD was 65 percent higher than average for children whose fathers had an IQ in that low range.

Gardner is careful not to overstate the magnitude of the risk associated with having a smart father. "Seeing this association with a high paternal technical IQ is interesting," she said. But she called the increased risk "very slight" and said that an apparent risk factor doesn't explain why a person has autism.

What's more, the work is missing the second half of the genetic puzzle: intelligence data from the children's mothers, says **Kelly Bakulski**, research assistant professor at the University of Michigan School of Public Health, who was not involved in the study. That information unfortunately wasn't available, as the Swedish military doesn't require women to sign up, Gardner says.

Even so, she says, "it's intriguing that this original observation actually holds up in our very modern-day data."

For more reports from the 2017 International Meeting for Autism Research, please [click here](#).