



# Researchers Identify Autism in Very Young High-Risk Children

This article is a review of the following research: Martin, K.B., Haltigan, J.D., Ekas, N., Prince E.B., Messinger, D.S. (2020). Attachment Security differs by later autism spectrum disorder: A prospective study. *Developmental Science*, 23(5):e12953. doi:10.1111/desc.12953.

Having a child with autism can create a strain on relationships, finances, energy and emotions. Before having additional children, parents often contemplate the likelihood of subsequent children having an autism spectrum disorder (ASD). One study that looked at 1.5 million children from Denmark found that siblings of ASD children have a 7 percent increased risk of having ASD themselves.<sup>1</sup> Another international study reported an increased risk of 19 percent.<sup>2</sup> Most experts agree that the risk lies somewhere around 10 percent, meaning that the odds of additional children having autism is about 1:10. This number may vary depending on the gender of the sibling, genetic conditions contributing to autism (i.e., mitochondrial dysfunction, Fragile X, etc.), family history of psychological disorders and other factors. Either way, research shows that if you have one child with autism, subsequent children are at an increased risk of also having the condition.





Given the increased risk, parents tend to watch for early signs of autism in siblings of ASD children. According to the Modified Checklist of Autism in Toddlers (M-CHAT), some of the early signs of ASD include: no smiling by six months; no meaningful gestures by 12 months (i.e., pointing); poor eye contact; and not responding to his/her name. However, these behaviors are not always clear in very young children but become more pronounced as a child ages. Consequently, pediatricians often recommend waiting until the child is a little older before offering a full evaluation. According to the American Academy of Pediatrics, the average age of an ASD diagnosis is four years old.

In this study, researchers from the University of Miami investigated early social and emotional characteristics in infants and toddlers at high risk of having autism. Developing and maintaining social relationships are among the most common challenges faced by ASD individuals. One of the first social relationships children will form is with a parent. Their attachment to a parent may give insight into their abilities to develop, or not develop, social relationships later in life.

In order to assess children's attachment relationship with their parent, this research team studied 15-month-old children at high risk of having ASD (i.e., the child had a sibling with ASD). The experiment had each child enter an unfamiliar playroom with a parent. Children were given time with their parent to explore. Researchers noted children's behavior during this time. Did they stay close to their parent? Did they explore? Were children cautious of the other adults in the room? After a period of time, the parent was briefly separated from the child. Did the child notice his/her parent was gone? Was the child upset? The researchers then noted the child's behavior when the parent returned. Did the child run to the parent? Was the child comforted by the parent? The experiment was repeated twice.

Based on the researcher's observations, the children were placed into four categories:

1

### Secure attachment

Children who explored the playroom, but kept their parent in safe proximity. These children came to their parent upon his/her return and were comforted by them.

2

### Insecure-avoidant attachment

Children who explored the playroom, but tended to ignore their parents. These children tended to be upset by the parent's absence, and to not come to their parent upon his/her return.

3

### Insecure-resistant attachment

Children who explored very little during playtime. These children made contact with their parent after being reunited, but were not easily comforted by their parent.

4

### Disorganized attachment

Children who had inconsistent or unpatterned behaviors during playtime, separation and reuniting.

*\*Note that the children with secure attachment were able to be comforted by their parent after being reunited. This indicated a social and emotional bond with a parent, and typical development in this area.*

*\*Note that the children with insecure-resistant attachment were not able to be comforted by their parent upon being reunited. This indicated a social and emotional disconnect with a parent, and was of concern to the researchers.*

When the children reached the age of three, the research team assessed them for an ASD diagnosis. All information was compiled and analyzed. Which groups, if any, were most likely to show ASD by the age of three? Did the social-emotional attachment patterns predict if a child would later be diagnosed with ASD?

## What did the research team find?

The research team found that high-risk children who were classified with "insecure-resistant attachment" were more than nine times more likely to receive an ASD diagnosis by the age of three when compared to the high-risk children with "secure attachments." This research team was the first to look at social-emotional connections of children before an autism diagnosis. It is clear that these early relationships and attachment patterns are important for early detection of ASD.

## What does this mean for me?

One of the main difficulties that individuals with autism face is developing and maintaining social relationships. This study shows that these difficulties begin early in childhood and can act as a diagnostic tool for infants and young children. If a child has a sibling with ASD (high-risk) and falls under an "insecure-resistant attachment" category, the child is more likely to be diagnosed with ASD alongside the sibling. Half of the high-risk siblings with resistant attachment went on to an ASD diagnosis, but half did not.

Your ASD child's siblings are at a high risk of also having ASD. Take note of the early signs of autism and mention any concerns you have to your child's pediatrician. Watch younger siblings for known signs of autism (i.e., lack of eye contact, not responding to name, not pointing to objects, etc.), and watch to see if they are creating bonds with parents, grandparents and siblings. Are they comforted by family members after a difficult situation?

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When autism is detected early, parents and professionals can take advantage of the brain's ability to grow, change and develop (known as plasticity) in order to mold behaviors and patterns. Early intervention is key.

## References

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2. Ozonoff, S., Young, G. S., Carter, A., Messinger, D., Yirmiya, N., Zwaigenbaum, L., Stone, W.L. (2011). Recurrence risk for autism spectrum disorders: A baby siblings research consortium study. *Pediatrics*, 128:e488-e495.

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