

# Autism Study: Baby's Babble May Contain Vital Clues

Traci Watson - [www.AolNews.com](http://www.AolNews.com)

(July 19) -- To a parent's ears, there's nothing more enchanting than the babble of a child learning to talk. Now research shows that those nonsense syllables could contain coded signals that a toddler is autistic.

In a study released today, scientists report that they have designed a computer program that can distinguish between the speech of normal children and those with autism. Even though the work is only a first stab at analyzing audio recordings for signs of autism, it can correctly identify more than 85 percent of autistic and nonautistic children.

"We had no idea that this was possible," Kim Oller of the University of Memphis, head of the research team behind the study, told AOL News. "It's very surprising that you can use a totally objective system and get this much information so quickly."

The finding could eventually help doctors diagnose autism early in a child's life. Early diagnosis is crucial, because the earlier autistic children start intensive therapy, the more they improve.

If the computer program proves itself, "it would be very helpful to have an automated way to screen for autism," said Geraldine Dawson, a top autism researcher and the chief scientific officer for Autism Speaks, a science and advocacy group.

Autism is an often-devastating disorder that is being diagnosed in a growing number of children. One in 110 kids in the United States has autism or a related disorder, according to the U.S. Centers for Disease Control and Prevention. Children with full-blown autism have trouble communicating and relating to others. Many autistic kids, even as babies, avoid making eye contact. They may flap their hands and obsessively line up their toys rather than playing with them.

Scientists have known for decades that autistic children show early problems in their speech, but there's tremendous variety in how such toddlers distort their babbling, Oller said. That has made it difficult to use speech problems to help diagnose autism.

Oller and his colleagues tucked miniature voice recorders -- each roughly the weight of a candy bar -- into the chest pockets of more than 200 children ages 10 months to 4 years. The team then recorded everything that came out of the kids' mouths over six to eight days, for roughly 12 hours each day. The computer software filtered out crying, sneezes and coughs and focused on the sounds that resembled syllables.

All children mangle their syllables while learning to talk. But the scientists discovered that autistic children tended to do so far longer than normal children, making it easy for the software

to pick out the autistic kids' voices.

The current gold standard for diagnosing autism is a long observation session by a medical specialist who watches a child and tallies up activities characteristic of autism.

The computer program "is the first kind of system that's totally objective," Oller said. "I don't know of any other system that doesn't involve judgments being made by people."

He doesn't think his program alone, even when perfected, should be used to declare that a child is autistic. But audio analysis "could be used very effectively" as a tool for screening children whose parents are worried about their development, he said.

Dawson agrees, saying automated voice analysis could help "improve our ability to identify infants who are at risk." Such a tool could also be useful in countries where autism specialists are in short supply, she said.

The study is being published today in the Proceedings of the National Academy of Sciences. Several of the authors were paid consultants to a for-profit company that developed the recorder and computer program. The company was turned into a nonprofit foundation in 2009. Oller said the consulting fees had no influence on his research and that he stopped accepting them when he decided to write this paper.