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Toddlers With Autism Show Improved Social Skills Following Targeted Intervention

Targeting the core social deficits of Autism Spectrum Disorders (ASD) in early intervention programs yielded sustained improvements in social and communication skills even in very young children who have ASD, according to a study funded by the National Institute of Mental Health (NIMH), part of the National Institutes of Health.

The study was published online December 8, 2010, in the *Journal of Child Psychology and Psychiatry*.

Although some research suggests that ASD may be reliably diagnosed earlier than the current average age of 3 years, few interventions have been tested in children younger than 3.

During the course of typical development, children learn to interact with others in socially meaningful ways. Measures of social communication include:

- * Initiation of joint attention -- spontaneously directing others' attention to something of interest, such as by pointing or holding something up to show for social purposes rather than to ask for help.

- * Affect sharing -- sharing emotions with others through facial expressions paired with eye contact.

- * Socially engaged imitation -- imitating others' actions while showing social connectedness through eye contact.

Deficits in such measures are hallmark symptoms of ASD and can severely limit a child's ability to engage in and learn from interactions with others or from the world around them.

"This new report is encouraging, as the effects on social behavior appear to provide a scaffold for the development of skills beyond the research setting," said NIMH Director Thomas R. Insel, M.D. "We need better early interventions for the core deficits of autism."

Funded through the Studies to Advance Autism Research and Treatment (STAART) Network, Rebecca Landa, Ph.D., of Kennedy Krieger Institute, Baltimore, and colleagues randomly assigned 50 toddlers, ages 21-33 months old, who were diagnosed with ASD to one of two six-month interventions: Interpersonal Synchrony (IS) or Non-Interpersonal Synchrony (non-IS). Both interventions incorporated classroom-based activities led by a trained intervention provider, and a home-based component

involving parents who received specialized education and in-home training.

The interventions were designed to encourage children to make frequent and intentional efforts to engage others in communication or play. The single difference between interventions was that the IS group received more opportunities for joint attention, affect sharing, and socially engaged imitation. The toddlers were assessed at the start and end of the intervention and again six months later.

Children in both groups made improvements in social, cognitive and language skills during the six-month intervention period. Children who received IS made greater and more rapid gains than those in the non-IS group. The researchers also noted that children in the IS group used their newly acquired abilities with different people, locations, and type of activity. This is noteworthy because children with ASD have particular difficulty doing so. They tend to use new skills mostly within familiar routines and situations.

At the six-month follow-up, children in the IS group showed slower improvements in social communication compared to when they were receiving the intervention, but did not lose skills gained during the intervention period. In contrast, children in the non-IS group showed reduced social communication skills at follow-up compared to their performance during the intervention period.

"This is the first randomized controlled trial to examine an intervention focused on core social deficits of ASD in toddlers, and the first to show gains in these deficits resulting from intervention," said Landa. "Though preliminary, our findings provide promising evidence that such a supplementary curriculum can help improve social and communication skills in children younger than 3 who have ASD."

The researchers received additional study funding from the Health Resources and Services Administration.