

## New Directions in Early Detection and Intervention in Autism

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Dr. Dawson will discuss new methods for early detection and intervention that are appropriate for infants and toddlers with autism spectrum disorder. Methods for detecting infants at risk for autism are allowing parents and clinicians to begin intervention very early in life. Infancy is considered to be a period of marked plasticity in brain development and learning potential. The hope is that, by beginning autism intervention very early, we might be able to alter the trajectory of behavioral and brain development and reduce the severity of the disorder or even prevent it, in some cases.

The last several decades have witnessed an explosion of knowledge about how infants and toddlers learn. Given that the symptoms of autism spectrum disorders (ASD) often appear before the first birthday, this new knowledge can be brought to bear in our understanding of how best to intervene with young infants and toddlers who are at risk for autism. The earliest symptoms of autism suggest that the brain systems that support social and language development are affected. Motor symptoms are also likely to be affected in many infants. Studies of high risk infants (siblings of children with autism) and home videotapes taken of infants who later develop autism show that these infants spend less time looking at other people, are less responsive when their names are called, and often fail to develop early gestures, such as pointing, which are important for setting the stage for language development. The rapid learning capacity of infants, however, suggests the infant-toddler years are a period of great plasticity and change. This frames the challenge and promise of early intervention for infants and toddlers with ASD: we need to capitalize on the tremendous plasticity of the infant period so we can minimize the disabilities that often characterize ASD.

Dr. Dawson will describe new research based on prospective studies of infant siblings of children with autism that has provided new insight into the first signs of this condition. She will review new directions in developing treatment approaches for infants and toddlers with ASD. Research findings will be presented on the efficacy of The Early Start Denver Model (ESDM), which is a comprehensive, early intervention approach for toddlers with autism aged 12-36 months and continuing until ages 48-60 months. ESDM uses the knowledge of how the typical baby develops to inform how to facilitate a similar developmental trajectory in young infants who are at risk for autism.

In the ESDM intervention, a style of interaction is used in which adults capture children's attention to faces and bodies (social orienting) and then provide extremely clear social and communicative behavior signals and rewards that promote language, social and symbolic play, and social initiations from children. Results of a recent randomized controlled trial that assessed the efficacy of the ESDM intervention for improving outcomes of toddlers with ASD will be presented. Finally, factors that predict variation in children's response to early intervention will be discussed.