

July 29, 2010

Dear parents,

As part of our ongoing research program, we are conducting a series of studies that are designed to examine the way children, (aged six and older) and adults with autism spectrum disorders (ASD) attend to and integrate sensory information (touch, sight, hearing). Our ability to make sense of our world depends on our ability to integrate what we hear with what we see. For example, from a very young age, infants are able to recognize their mothers by combining information about the way they look (e.g. the outline of their faces) and the sounds they make (e.g. the pitch of their voices).

People with ASD have stated in books and in online forums that they have difficulties with certain sensory information. Some are hypersensitive to certain sounds and cover their ears with their hands, while others can only wear certain fabric of clothes, or need to cut the tags out of their shirts to wear them. Several other persons with ASD have said that they have difficulty with combining information from different senses. For example, a high functioning woman with autism said that she only goes to see movies that are subtitled because she cannot hear and see at the same time. Although these reports are compelling, there is no research to date that examines the manner in which persons with ASD integrate sensory information. Can we support the differences that persons with ASD report with scientific research? Do persons with ASD integrate sensory information differently than typically developing people? Is it similar to persons that are typically developing? Is it similar to persons with sensory difficulties but not an ASD? We at the Cognitive Neurophysiology Lab at Albert Einstein College of Medicine (CNL-AECOM) are committed to answering these research questions.

To do this, we conduct what are called Event-Related Potentials (or ERP) studies. This means that when your child comes to our center, we place what looks like a bathing cap on his/her head. These caps are fitted with electrodes that rest on the surface of the cap and measure electrical activity of the brain while participants watch movies and complete experimental tasks that are presented as computer games. All that is required is that your child presses a button on a joystick. ERPs are a painless procedure that can easily be used with even the youngest infants.

The testing is completed in four sessions of approximately 4-6 hours. In a first session, we administer basic tests that examine language abilities and overall level of functioning and in a second session, the computer tasks and ERP recordings are completed. The first session allows us to establish your child's level of functioning and will help us determine which experimental tasks are appropriate given your child's age and ability level. These are psychometric tests commonly used by psychologists and speech and language pathologists, and have been used extensively with children of all ages.

You will be provided with clinical feedback and recommendations for your child in the form of a written report signed by a psychologist. While your child is being tested, we will ask parents to fill out some questionnaires that look at your child's sensory preferences, personal strengths, and developmental history. If your child does not yet have an official diagnosis of an ASD, we will also complete diagnostic measures that consist of an observation of the child and an interview with you, the parent. The results of these questionnaires and diagnostic measures will also be incorporated into the psychological report we provide to you. This report will only be given to you; whether you choose to share this information with your child's school, teachers, or therapists is left entirely to your own discretion. This report is provided free of charge.

Please be advised that the data in this study will be used only for research purposes and will be held in the strictest confidence and that your child's results will not affect his/her educational status. Results will be published as group averages and no personal information will be used in the publication of findings. We greatly appreciate your participation in this study.

If you have any questions or would like to schedule a time to come to the center and participate in the research, please contact Dr. Natalie Russo at 718-862-1821.

Our IRB approval number is: H-0549

Sincerely,



---

Sophie Molholm, Ph.D.  
Associate Professor, Departments of Pediatrics and Neuroscience  
Children's Evaluation and Rehabilitation Center (CERC)  
Albert Einstein College of Medicine



---

John Foxe, Ph.D.  
Professor & Director of Research, Departments of Pediatrics and Neuroscience  
Children's Evaluation and Rehabilitation Center (CERC)  
Albert Einstein College of Medicine