

Autism under the microscope

By Janice Youngwith

Finding a cause and cure, better understanding physiological changes and putting together the puzzle pieces for successful treatment outcomes are all at the heart of autism research efforts.

"While we are not a research organization, we disseminate research information to our constituents and contribute to major research initiatives," explains Matt Ackerman, executive director, Autism Society of Illinois, who says the organization is a broker of information about current studies and issues bulletins to constituents to communicate and explain key new research findings.

Since 1965, the Autism Society of America has been a leader in serving people with autism, their families and the professionals who serve them.

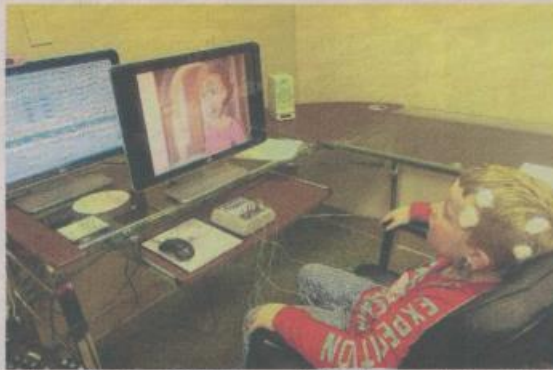
Nationally, the Autism Society sponsors two initiatives in the research arena. The first, an environmental health initiative, reviews and interprets current research findings in environmental exposures on brain development and on general public health. The project includes data collection, research on environmental triggers of autism, as well as environmental factors that exacerbate health conditions.

The second is a comprehensive, coordinated treatment-guided research initiative to learn more about autism through the ways people respond to treatments and analyzing what has been effective in diet, medical treatments, educational, behavioral and therapeutic interventions.

Local research efforts include the work of Ann Rigby, founder and director of The Neuroconnection in Naperville, who says "autism is an epigenetic phenomenon; one that environment and genetics have a role in creating."

According to Rigby, autism is thought to be a disorder of inflammation affecting all systems in the body including gastrointestinal, immune and the central nervous system.

"Because of this, and as with any health problem, it is



Jackson Diehl, 7, of Wheaton, works in his connectivity guided neurofeedback session.

important to first be assessed by a medical professional who understands the scope of all of the systems affected in autism," she cautions.

Rigby says parents receiving a diagnosis of autism for their children can become confused because there are so many different symptoms and no clear road map to addressing all of the issues associated with this brain and gastrointestinal-based disorder.

The Autism Society of America estimates that between 60-80 percent of children with an autism spectrum disorder have gastrointestinal problems including diarrhea, constipation and/or abdominal pain.

"Since GI problems play a large role in autism spectrum disorder, children should have their biological functions reviewed by a physician who understands the medical condition experienced by these children and can help with their medical issues first," explains Rigby.

At The Neuroconnection, where Rigby uses four-channel connectivity guided neurofeedback to focus on brainwaves provided by electrical signals as neurons fire, therapists report that children come to the therapeutic setting at a different point in their journey from diagnosis to treatment of autism.

"We offer unique services that directly intervene in a way that decreases brain-based symptoms contributing to problems in functioning,"

explains Rigby, who is president of the board of the Autism Society of Illinois. "As with any health problem, it is important to first assess the child to see what they are experiencing."

Experts agree, early intervention is important when it comes to speech and language, motor milestones and learning.

"Neurofeedback combined with other therapies can improve those things that impede development in many areas because once improvement in the neuropathways are made, it allows other interventions to show faster gains," Rigby notes. "Connectivity guided neurofeedback gets to the root of the problem so that a child can catch up in social and emotional areas, language development, fine motor control development and their capacity to learn."

Typically, she explains, when a parent comes to The Neuroconnection, their child has been diagnosed by a developmental pediatrician or early intervention specialist and has begun some interventions.

"Some of our patients begin at the clinic on medications that physicians have prescribed to control behaviors, some are on restrictive diets, or doing biomedical interventions that have been helpful, and many have used or are in behavior therapies, or speech and occupational therapies," she reports.

Still, even with these interventions, she observes that

many of her clients still have significant challenges such as:

- Speech delays, including some children who have very limited speech, scripting, problems engaging in meaningful age appropriate conversation, receptive language delays, etc.

- Sensory integration issues.
- Difficulty with transition.
- Problems with attention and shifting attention.

- Difficulty with social pragmatics, problems with empathy, difficulty with eye contact, or disinterest in others.

- Mood dysregulation, tantrums, emotional outbursts, and anxiety.

- Cognitive delays.
- Learning disabilities.

Using QEEG and improved with connectivity guided neurofeedback, practitioners like Rigby address brain abnormalities directly to reduce symptoms.

"To date we have tracked 50 autism cases using connectivity guided neurofeedback to completion," states Rigby, who notes that of these 50 autism cases, results show an average 50 percent drop in autism symptoms shown on the standardized Autism Treatment Evaluation Checklist.

"This drop in symptoms, when followed up one year later has shown to be maintained or in many cases improves further, indicating the lasting effect of connectivity-guided neurofeedback."

Neurofeedback has been used for more than 25 years in the treatment of attention deficit, anxiety, chronic fatigue, substance abuse and mood disorders.

Experts at The Neuroconnection have been providing neurofeedback for 15 years and connectivity guided neurofeedback since 2008.



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