

Behavioral Resources and Institute for Neuropsychological Services

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Anticipated Upcoming Education:

- Sensory Integration

Now Hear This!

Monitoring your child's hearing health is crucial for development.

By Lynn Carahaly, MA, CCC-SLP

According to the American Speech and Hearing Association, the prevalence of speech sound disorders in young children is 8 to 9 percent. Oftentimes, this is compounded by problems with the inner ear and hearing systems. Hearing is imperative for speech and language development, but also for overall brain development.

Crucial Cochlear-Vestibular System

The inner ear contains two sensory systems—the cochlea for detecting sound and the vestibular system for sensing balance. The dynamic and spectral range of hearing is broader than any other sensory system. If we translate vision to the same scale, we can only see a 10th of the corresponding dynamic intensity from dim to bright and only one "octave" of visual light frequency. The vestibular system of the inner ear is responsible for

balance, coordination and awareness of the body's position in space, and it also sends signals to the neural structures that control our eye movements and the muscles that keep us upright.

Hearing also provides information not just for speech sounds and language, but prosody elements like intonation, vocal stress, emotional state, rhythm and pitch. Due to the impact the cochlear-vestibular system has on the entire body, therefore, it is easy to see why treating hearing problems is critically important.

Distorted Hearing

Normal auditory stimulation, listening to environmental sounds and language, wires the auditory system to the brain, promoting speech and language development, spatial awareness, vestibular stimulation for coordination, balance and more. If the ears are full of fluid during the developmental process, the "wiring" can be distorted. Ear infections and chronic fluid in the middle ear can be a major source of problems with developing any of the above areas. Essentially, a child must be able to hear well in order to develop efficient and mature neurological pathways for speech and language development, as well as literacy skills.

Some parents refer to selective hearing as a problem. However, your child may truly have trouble listening. Listening is how the brain *processes* auditory information. Children with poor auditory processing skills tend to exhibit the following problems:

- Have hard time hearing in noisy environments

- May seem to have hearing loss
- Difficulty with sound discrimination
- Difficulty comprehending spoken and/or written language
- Problems following directions
- Easily distracted in noisy environments
- Hard time following a conversation
- Disorganized and forgetful
- Reading comprehension problems
- Trouble with verbal math problems
- Difficulty reading, spelling and/or writing
- Trouble recalling a story in proper sequence

Auditory Processing problems can closely mimic ADHD symptoms. If a child is having a hard time processing auditory information, he or she will often appear to not be paying attention. It is like a bad cell phone connection in that the child just doesn't have a good signal. Therefore, they miss information, which can result in inattentive behaviors. Often, children are misdiagnosed with ADHD when the deficits actually auditory system based.

Auditory processing difficulties are also a major cause of dyslexia. Neurologists at Yale have examined brain images of children's reading. From MRI brain scans, researchers discovered that the auditory/language centers of children who read well are very active. Other children with less



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blood flow in the same regions had difficulty reading. Studies such as this confirm that children who have a strong ear-brain connection tend to be good readers. Additional studies have concluded that children with multiple ear infections, a speech articulation problem or weaknesses in auditory skills are at risk for reading disorders.

Promote Phonological Proficiency

Children begin to read with their ears first. We know that early sound play activities such as nursery rhymes and sound-to-word associations such as “D is for DOG” all pre-wire the brain for the concept that a letter (visual) is a code for a sound (auditory). Children with strong phonological awareness skills tend to be good readers.

Phonological awareness—the explicit understanding of a word’s sound structure—is critical for the efficient decoding of printed words and the ability to form connections between sounds and letters when spelling. It is a multi-level skill that reflects how words can be broken down into smaller units in differing ways. Tasks that require children to segment words into syllables, (syllable-level tasks), identify or produce rhyming words (rhyme-level tasks), identify individual sounds in words, blend sounds to make words or segment words into their individual sounds (phoneme-level tasks) are all examples of skills that are encompassed under phonological awareness.

Measures of phonological awareness, particularly at the phoneme level, are powerful predictors of reading success and can predict early literacy performance more accurately than variables such as intelligence scores and vocabulary

knowledge.

There are multiple strategies that can be completed in the home, through listening programs, clinical treatment or a combination of treatment interventions.

If you are concerned about your child’s listening skills or overall learning ability, The Alcott Center and BRAINS can offer assistance. Please contact us for more information.

Lynn Carahaly, MA, CCC-SLP, is an American Speech and Hearing Association (ASHA) certified speech-language pathologist for The Alcott Center for Cognitive Enhancement, LLC

Resources:

BRAINS, LLP in collaboration with The Alcott Center for Cognitive Enhancement, LLC
www.brainspotential.com or
www.thinkalcott.com/

American Speech and Hearing Association www.asha.org



BRAINS Updates:

Groups

To increase the participation and commitment to the group process, BRAINS will now be billing groups in 4-session increments. Routine attendance is important for the optimal success of everyone in the group, with variable attendance decreasing effectiveness and the therapists ability to plan activities. As a result, BRAINS staff are making an effort to optimize the success of the group, your child, adolescent, or adult, and the investment in treatment.

The following Groups are now enrolling or continue to be active. ***Many of the groups have limited enrollment, so please reserve a position for the group Soon!***

Children

Ages 2-4: **Developmental Interaction and Awareness** *frequency will be discussed with families*

Saturdays 10:00-11:00 am

Carrie Zinser, MSW

Ages 5-6: **Social Communication**

Thursdays 5:30—6:30 pm

Sallie Keaton, SLP

Ages 7-9: **Social Awareness Class**—8 week

Tuesdays 5:30—6:30 pm

Brad Bridges, LMSW

Ages 7-10: **Gymnastics for the Brain, Moving to Learn** *4-week training with parents: 4-week with children—alternating*
Time to be announced

Janice Dewey, MEd

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Ages 10-12: **Social Awareness Group**
Tuesdays 6:30—7:30 pm
Brad Bridges, LMSW

Ages 9-12: **Depression & Anxiety in Girls**
Fridays 5:00—6:00 pm
Valencia Agnew, MA, LLP

Adolescents

Ages 13-16: **Depression & Anxiety in Girls**
Thursdays 5:00—6:00 pm
Valencia Agnew, MA, LLP

Ages 12-18: **Substance Abuse Class**—8 week
Mondays 5:00—6:00 pm
Tom Denczek, LMSW

Ages 13-17: **Social Awareness Group**
Males
Every other Tuesday 6:00—7:00 pm
Tom Denczek, LMSW

Females
Saturday 9:00—10:00 am
Jennifer Edwardson, LMSW

Ages 17+: **Social Awareness Group**
Males
Every other Tuesday 6:00-7:00 pm
Tom Denczek, LMSW

Females
Saturday 10:30—11:30 am
Jennifer Edwardson, LMSW

Surviving High School
Wednesdays 4:30—5:30 pm
Brad Bridges, LMSW

Adults

Couples Communication Class --5 week
Saturdays 11:00 - 12:30
Valencia Agnew, MA LLP

Parents and Families

Parent Support
Parents of teens/young adults with ASD
Once a month beginning December 8 Saturdays 9:30—11:00 am
Tom Denczek, LMSW

Shapedown Family Class --10 week Class
Tuesdays 6:00-8:00pm
OR Saturdays 10:00am-12:00pm
Kris Henderson, MA, LPC

Parent Information Group Biweekly—
Wednesdays 6:30—7:30pm
Dale Ranson, Ed.D.

Sibling Group
Wednesdays 5:30—6:30pm
Dale Ranson, Ed.D

Staff Updates:

Since opening, BRAINS has recruited several therapeutic and specialty staff to meet the expanding needs of children and families in the community. The biographies of these staff and all staff are available through the BRAINS website. In brief:

- **Tom Denczek, MSW**, is a therapist with special interest in moderate to high functioning autistic spectrum disorders, teen and adult substance use, families, and mental health concerns with children/adolescents and/or their families.
- **Brad Bridges, MSW**, is the newest therapist joining BRAINS. He is working closely with Drs. Manor and Wolff to provide treatment intervention for younger children in the community and their families for both individual support and parent behavioral consultation. He has also worked actively with children with behavioral concerns, previously providing home based therapy.

Services Currently Offered and Ages:

- [Neuropsychology](#) 18-months – young adults
- [Counseling/consultation](#) 18-months - adults
- [Physical Therapy](#) Infancy - adolescents
- [Occupational Therapy](#) Infancy – elementary
- [Speech & Language](#) Infancy - adolescents
- [Neurofeedback](#) 7-years - adult
- [Education Tutoring](#) all ages
- [Education Consultation](#) all ages
- [Groups](#) 2-4 years – young adult
- [Alcott Center](#) 5-years—young adult

- **Tracy Young, OTR**, is an Occupational Therapist specializing in children 0-6 years of age. She understands school and community based treatment models to optimize the balance of care between different settings. Further, she recognizes the importance of sensory processing and regulation disorders, which can result in behavioral problems, struggles in learning, and frustration for these children and their families.
- **Dale Ranson, Ed D**, is a specialist with a variety of experience and expertise. He is an expert in knowing the Special Education systems in Michigan, has lead groups, and provides families with consultation, particularly regarding Autistic Spectrum Disorders. He assists with

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“developing road maps” for families to set expectations and gain insight in how to encourage ongoing functional gains for these adolescents progressing toward young adulthood. Finally, he has developed a strong interest in helping the siblings of children with ASD’s to understand, cope, and to develop their own identity in these family systems.

- **Jan Dewey, M Ed.** is another special education specialist. She has a commitment to assisting children and families to use different learning strategies to advance their learning potential or mental well-being in light of their unique challenges. She has lead our early intervention groups for 2-4 year olds and has a wealth of experience/knowledge in the Michigan Education System.

New Agency Partnership:

BRAINS, LLP has formalized a partnership with The Alcott Center for Cognitive Enhancement.

BRAINS, LLP is in the final stages of formalizing a professional relationship with The Alcott Center for Cognitive Enhancement, LLC. This partnership garners unique treatment opportunities in the Grand Rapids area for systems not currently available for auditory processing, Central Auditory Processing or other cognitive integration models. This alliance will expand the uniqueness of therapeutic intervention, like BRAINS’s existing Neurofeedback and Orton Gillingham, to offer interventions either independent of or in conjunction with medications. With these interventions it is hoped that treatment can be more efficient, less frustrating, and specific to the

area of concern. Other centers in Grand Rapids using different auditory models include the Child Development Center in Jenison and the IEP Therapy Center in Rockford. BRAINS felt more comfortable with the research supporting the interventions offered by The Alcott Center and anticipates developing structured research models to gain additional knowledge on the utility of these interventions.

BRAINS Foundation Update

BRAINS now has four of five essential board members for the inaugural committee. We are actively recruiting the last member. Assuming this occurs in the next weeks, the board will meet to solidify the bylaws and financial mission of the foundation. With this, the information will be sent to the Federal Government for 501(c) 3 status, non-taxable status. If this status is recognized, the Foundation can move forward with recruiting funds to defray the cost of treatment for families, to assist with developing a sliding fee scale, and to establish a student training budget, since a majority of services will be provided by students in from the Foundation, under the direct supervision of specialists in the area of specialization.

