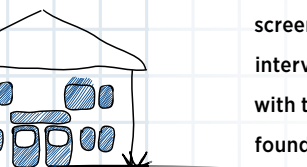


# LEARNING DISABILITIES & HEARING LOSS

## Where Does One End and the Other Begin?



Children who are deaf and hard of hearing (DHH) are not immune to the specific learning disabilities (LD) that children with typical hearing experience and these learning disabilities can have a profound impact on their academic achievement, behavior and social skills (Edwards & Crocker, 2008). Universal newborn hearing screening, appropriate hearing technology and early intervention combine to provide children who are DHH with the opportunity to develop a strong language foundation along with cognitive and communication skills. “Having a strong language foundation is central to learning,” says Elizabeth Adams, Ph.D., clinical psychologist at The River School in Washington, D.C. “Without this strong foundation there can be some academic gaps; but if a child has a language model they can access, they should be able to learn.”

What happens when a child has an appropriate language model and the appropriate supports are in place but still has difficulties learning? Parents and professionals are often aware of the unique challenges that a child who is DHH faces in the classroom, and the fact that hearing loss by itself can often create learning difficulties. However, delayed academic progress is frequently attributed solely to the child’s hearing loss, and the possibility of specific additional learning disabilities is not always considered (Edwards & Crocker, 2008). Through an understanding of the subtleties in the process of identifying additional learning disabilities in children who are DHH, parents, educators and other professionals can be aware of “red flags” that may indicate a learning difficulty.

### Understanding Hearing Loss and Learning Disabilities: What Is the Relationship?

It is difficult to pinpoint the frequency of learning disabilities among children who are DHH. Recent research suggests that there is a greater incidence of learning disabilities in children who are DHH than children with typical hearing (Marschark & Hauser, 2012). The Gallaudet Research Institute (2011) estimates that roughly eight percent of DHH students have a learning disability, yet some surveys have suggested the incidence could be as high as 23 percent (Marschark, 2007).

The suggestion of a greater incidence of learning disabilities amongst children who are DHH (Marschark & Hauser, 2012; Marschark, 2007) may be due to the fact that most of the primary causes of hearing loss are also the primary causes of neurological dysfunction, which can lead to learning disabilities such as premature birth, meningitis, anoxia, maternal use of teratogenic medication and certain genetic syndromes (Morgan & Vernon, 1994; Marschark, 2007). It is important to approach these etiologies with caution as each condition is simply associated with learning disabilities and in no way predicts the eventual development of a learning disability (Mauk & Mauk, 1998).

### Perceiving vs. Processing

Hearing loss and learning disabilities both affect a child’s learning; however, they do so in different ways. Soukup & Feinstein (2007) stress the importance of determining whether the learning difficulties are the result of a perception problem (hearing loss) or a processing problem (learning disabilities).

When a sensory function, such as hearing, is impaired, then there can be difficulties in identifying, receiving and interpreting information. Either the student is not hearing key parts of a teacher’s lesson, or there is unfamiliarity with part of the lesson, such as vocabulary, so the student is not interpreting the lesson correctly.

Learning disabilities are a group of varying disorders that have a negative impact on learning. They may affect one’s ability to speak, listen, think, read, write,

spell or compute (NCLD, 2013). Some of the more commonly diagnosed learning disabilities include dyslexia, dyspraxia and auditory processing disorder.

When it comes to the issue of identifying learning disabilities, Stewart and Kluwin (2001) believe that they are a result of a processing problem, where the student receives the information they are reading in a textbook or working on in class, but the brain is unable to organize incoming information adequately. Examples of these types of processing problems are when a child can identify numbers but struggles with memorizing and organizing these numbers (dyscalculia) or if the child listens to a story, but then does not have the ability to retell it (dysphasia).

### Diagnosing Learning Disabilities in Children Who Are Deaf and Hard of Hearing

The diagnosis of a learning disability in a child who is DHH is difficult to navigate. In the past, children who were DHH were automatically assumed to have a learning disability due to the presence of a hearing loss or the lack of spoken language. As a result, PL 94-142 (reauthorized in 2004 and better known as the Individuals with Disabilities Education Act or IDEA) states the classification of a learning disability,

...does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps; mental retardation; emotional disturbance; or environmental, cultural, or economic disadvantage (U.S. Department of Education, 2006).

It is understandable why there was a need to reduce the over-classification of learning disabilities in children who are DHH. According to Calderon (1998) using the two-year discrepancy between IQ and academic achievement would have resulted in classifying the majority of children who are DHH by the time they reached 3<sup>rd</sup> or 4<sup>th</sup> grade with a learning disability. “Thankfully the cognitive-academic split is no longer used as an absolute indicator of a learning disability

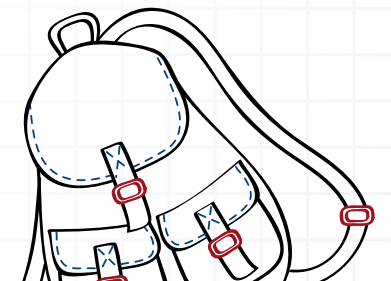
(i.e., if children had it, LD was present; if not, there was assumed to be no LD present),” says Adams. “While a cognitive-academic split would still be interesting, the current approach to testing is geared more towards pattern analysis across a number of different measures that assess various domains of functioning. It is through careful analysis of these patterns that strengths, weaknesses, functioning and diagnoses are identified.”

This so-called IDEA “exclusion clause” serves as both a blessing and a curse when it comes to educating children who are DHH. On the one hand, it prevents the automatic assumption of a learning disability thereby focusing attention on the specific accommodations and needs related to hearing loss. However, the exclusion clause has also been interpreted by many states to mean that the learning difficulties of children who are DHH can only be the result of hearing loss and not a neurological dysfunction (Soukup & Feinstein, 2007).

“It’s important to realize that my son’s learning disabilities would exist even if he heard perfectly,” says Christina, a mother, whose 16-year-old son is a bilateral cochlear implant user. “After a couple of false starts we were finally able to find a psychologist who was able to take his hearing loss into account while diagnosing his learning difficulties. That attention made all the difference in the world.”

If you suspect your child might have an additional learning disability, it is critical to work with someone who has experience working with children who are DHH. “Children who are DHH are such a heterogeneous population,” says Lois Heymann, director of the Steven and Shelley Einhorn Communication Center in New York City, “that any evaluator needs to know the variables that are involved in hearing loss, such as: How serious is the loss? When was the child diagnosed? At what age were they aided? What about residual hearing? All these facets need to be taken into account as all that impacts what kind of therapy a child might need.”

BY KRISTYANN KRYWKO, ED.D.



## Assessing Learning Disabilities in Children with Hearing Loss

Morgan & Vernon (1994) state that assessment for learning disabilities of a child who is DHH should include at least eight different areas of data:

1. A case history of the type and degree of hearing loss, age at onset, cause of hearing loss, birth and medical history, age at which developmental milestones were achieved, family history, and any other disabilities
2. An educational history
3. Results from two measures of intellectual functioning (i.e., Test of Nonverbal Intelligence and the Wechsler Intelligence Scale for Children)
4. Results from educational achievement such as Stanford Achievement Test, Kaufman Test of Educational Achievement, Peabody Individual Achievement Test, or the Woodcock-Johnson Psycho-Educational Battery
5. Results from neuropsychological screening instruments to evaluate visual-motor integration skills such as the Bender Visual-Motor Gestalt Test and the Developmental Test of Visual-Motor Integration
6. Results from assessment of adaptive behavior functioning or classroom behavior with instruments such as the Vineland Adaptive Behavior Scale, the AAMD Adaptive Behavior Scale or Connor's Rating Scales
7. An audiologic evaluation and vision screening
8. An assessment of the student's communication and language skills

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7. An audiologic evaluation and vision screening

8. An assessment of the student's communication and language skills

While this list serves as a great starting point in collecting data and information about your child, it is important to remember that each child has individual circumstances and additional measures and sources of information might be needed. "I would also want to know a lot of information about the early intervention, language choices, language and education environments at home and school, and a really in-depth analysis of current speech and/or language functioning," says Adams.

### Rising to the Challenge: What Parents & Educators Need to Know

Although it is challenging to diagnose a child who is DHH with a learning disability, this diagnosis is essential to ensure that a plan can be implemented to help him/her develop academically and emotionally. The frustration of having a child's learning difficulties misdiagnosed is that interventions put in place will be neither appropriate nor helpful.

"Years of academic frustration and failure can not only hinder a child's

ability to develop skills that will lead to independence and mastery," says Soukup, "but can also hinder the development of healthy self-esteem."

The combination of hearing loss and learning disabilities presents a complex challenge to parents and professionals. However, none of the challenges are insurmountable as long as there is awareness and understanding on the part of parents, teachers and professionals that hearing loss and learning disabilities can coexist. As every child has unique needs, it is difficult to suggest a standardized approach to dealing with learning disabilities. It might take time, but it is important to find professionals who have

experiences working with children with hearing loss to make sure appropriate strategies are put into place. **vv**

#### REFERENCES

- Calderon, R. (Winter 1998). "Learning disability, neuropsychology, and deaf youth: Theory, research, and practice." *Journal of Deaf Studies and Deaf Education*, 3(1), 1-3.
- Edwards, L., & Crocker, S. (2008). *Psychological Processes in Deaf Children with Complex Needs: An Evidence-Based Practical Guide*. London, United Kingdom: Jessica Kingsley Publishers.
- Gallaudet Research Institute (2011). *Annual Survey of Deaf & Hard of Hearing Youth*. Retrieved from [http://www.gallaudet.edu/gallaudet\\_research\\_institute/demographics.html](http://www.gallaudet.edu/gallaudet_research_institute/demographics.html)
- Marschark, M. (2007). *Raising and Educating a Deaf Child*. New York, NY: Oxford University Press.
- Marschark, M., & Hauser, P. (2012). *How Deaf Children Learn*. New York, NY: Oxford University Press.
- Mauk, G., & Mauk, P. (Winter 1998). "Considerations, conceptualizations, and challenges in the study of concomitant learning disabilities among children and adolescents who are deaf or hard of hearing." *Journal of Deaf Studies and Deaf Education*, 3(1), 15-34.

- Morgan, A., & Vernon, M. (1994). "A guide to the diagnosis of learning disabilities in deaf and hard of hearing children and adults." *American Annals of the Deaf*, 139(3), 358-369.
- NCLD, Editorial Team (2013). *What Are Learning Disabilities?* Retrieved from <http://www.ncl.org/types-learning-disabilities/what-is-ld/what-are-learning-disabilities>
- Pollack, B. (1997). *Educating Children Who Are Deaf or Hard of Hearing: Additional Learning Problems*. Reston, VA: ERIC Clearinghouse on Disabilities and Gifted Education. Document Reproduction Service No. ED#414666
- Stewart, D., & Kluwin, T. (2001). "Classroom management and learning disabilities." In D. Stewart and T. Kluwin, *Teaching Deaf and Hard of Hearing Students: Content, Strategies, and Curriculum* (pp. 289-313). Needham Heights, MA: Allyn & Bacon.
- Soukup, M., & Feinstein, S. (Spring 2007). "Identification, assessment, and intervention strategies for deaf and hard of hearing students with learning disabilities." *American Annals of the Deaf*, 152(1), 56-62.
- United States Department of Education (2006). *Identification of Specific Learning Disabilities*. Retrieved September 2013 from <http://idea.ed.gov/explore/view/p/root,dynamic,TopicalBrief,23>

### Tips for Parents

A key component of moving towards the identification of a learning disability is awareness and keeping track of patterns over time. The following are some suggestions to help parents and educators ensure that children who are DHH receive the academic supports they need.

- A child who is DHH should follow typical patterns of growth and achievement. Hearing loss is usually not accompanied by characteristics of the processing problems of learning disabilities such as visual-perceptual problems, attention deficits, perceptual-motor difficulties, severe inability to learn vocabulary, consistent retention and memory problems, or consistent distractive behavior and emotional factors. If any of these behaviors are present on a consistent basis in your child, then it is important to seek more information as to why these issues are occurring (Pollack, 1997).
- Learning disabilities do not appear overnight. "There will likely be red flags along the way that a child will have been lagging behind from the start," Heymann said. Parents should collect data about their child's academic performance (assignments s/he has completed, struggles they have observed while helping her/him with homework, consistent difficulties highlighted on school reports) and then visit with their child's teacher and share concerns. The teacher may try to implement strategies to address areas of concern. Other possibilities include the implementation of a response to intervention plan (RTI). RTI differs from the previous "ability-achievement discrepancy" that was used to identify children for special education. The idea is that education decisions will instead be based on the outcomes from targeted classroom interventions. One issue that arises from this approach is that school districts may keep a child in RTI and delay classification for special education services. As a parent you have the right to request an evaluation of your child at any time.
- Some teachers are good at picking up subtleties in a child's learning. Be careful not to dismiss a teacher's concerns by immediately thinking that they don't understand children who are DHH. Instead, work together with the teacher in looking for evidence as to what exact difficulties your child might have.
- Pinpointing behaviors that might indicate a learning disability can be difficult in children who are DHH, but the following are signs to look for, according to Soukup. These challenges might include: difficulties processing visual information, extreme difficulty in learning and retaining vocabulary (reading and spelling), reading difficulties, challenges with handwriting, disorders in attention, problems with organization, and inappropriate social skills.
- Children with learning difficulties demonstrate difficulties that are consistent and do not resolve over time. For example, "vocabulary will not grow the same way in a child who is DHH," says Heymann, "but this is not a learning disability." Similarly, Adams suggests that "if a child has a two-year language delay, of course there would be some difficulties in an academic setting, but that doesn't mean there is a learning disability."
- Increased demands can unmask learning difficulties. "Some kids are really good at compensating in their environment," says Adams, "and develop strategies that can get them by for awhile." The amount of struggle a child has will impact whether they are identified with a learning disability and qualify for services. Sometimes there is not enough of a learning discrepancy to meet qualification standards.

# Online Professional Education

for educators, parents and professionals who wish to expand their knowledge on topics related to children who are deaf and hard of hearing.

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