



Psyched Express

WINTER, 2016

FROM CAROL MURPHY, MA, CCC-SLP AND KATHRYN KEITHLY PSY.D, LEP

“A capacity and taste for reading gives access to whatever has already been discovered by others.” *Abraham Lincoln*

Dyslexia Revisited

There is new and startling data on reading, nutritional information that may help every child and research that may help parents and teachers decide what kind of help a child needs.

Dyslexia is one of those terms that is thrown around in cycles, a frenzied return happening every five or so years. Mostly it is still confusing, with a collection of symptoms, some of which may apply to other learning problems. These symptoms sometimes remind me of the flu because everyone's flu symptoms, degree of infection and ability to recover are different, depending on how well they take care of themselves and what other conditions are present.

But, dyslexia is also one of the most studied learning problems, one that probably impacts someone you know and disables many people to the point that they never learn to read.

So, let's start with the accepted definition of dyslexia right from the American Dyslexia Association and the Learning Disabilities Association of America.

“Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.”

As I said above, some of these symptoms can be applied to other learning problems, so differential diagnosis is crucial. Without the proper diagnosis, the appropriate program cannot be recommended.

Brain Scans May Help Diagnose Dyslexia

Differences in a key language structure can be seen even before children start learning to read, Anne Trafton, MIT News Office ,August 13, 2013

About 10 percent of the U.S. population suffers from dyslexia, a condition that makes learning to read difficult. Dyslexia is usually diagnosed around second grade, but the results of a new study from MIT could help identify those children before they even begin reading, so they can be given extra help earlier. When comparing the brain scans and the results of several different types of pre-reading tests, the researchers found a correlation between the size and organization of the arcuate fasciculus and performance on tests of phonological



awareness — the ability to identify and manipulate the sounds of language.

In another study, UC San Francisco (UCSF) researchers in the [Dyslexia Program](#) aim to predict whether children will develop dyslexia before they show signs of reading and speech problems, so early intervention can improve their quality of life.

“Early identification and interventions are extremely important in children with dyslexia as well as most neurodevelopmental disorders,” said Fumiko Hoeft, UCSF associate professor and member of the UCSF Dyslexia Center, in a press release. “Accumulation of research data such as ours may one day help us to identify kids who might be at risk for dyslexia, rather than waiting for children to become poor readers and experience failure.”

In a recent longitudinal study, Hoeft’s research team studied 38 young children using structural MRI to track their brain development between kindergarten and third grade as they formally learned to read in school. The participating children were healthy, native-English speakers with varying pre-literacy skills and family histories of reading difficulties. They had MRI brain scans at age 5 or 6 and again 3 years later. At both time points, they also completed a battery of standardized tests, including reading and cognitive assessments.

In particular, the researchers were interested in the children’s white matter development, which is critical for perceiving, thinking and learning. They found that volume changes in the left hemisphere white matter in the temporo-parietal region (just behind and above the left ear) was highly predictive of reading outcomes. This region is known to be important for language, reading and speech.



Three Forms of Dyslexia

Phonological Dyslexia

This is pretty much what people are thinking of when they talk about kids with dyslexia. Phonological awareness is the big issue here. This includes trouble breaking words down into syllables and into smaller sound units called *phonemes*.

For example, if you say a word out loud to a child with weak phonemic skills, she can hear the word just fine and repeat it back to you. But she’ll have trouble telling you how to split it apart into the different sounds that make up this word.

Difficulties in this area can make it hard for readers to match phonemes with their written symbols (graphemes). This makes it hard to sound out or “decode”

words.

Surface Dyslexia

Some kids struggle with reading because they can't recognize words by sight. This is an important skill for a couple of reasons. One is that some words have tricky spellings. Words like *weight* and *debt* [can't be sounded out](#)—readers need to memorize them.

The other reason has to do with reading fluency. To be able to read quickly and accurately, kids need to recognize many common words at a glance—without sounding them out.

Orthographic Dyslexia

Understanding English orthography requires that students understand how words are structured which does require a basis in phonology, but if the student is unable to translate their adequate phonological awareness skills to the written word, then it stands to reason that they have an orthographic processing deficit, and the intervention should focus on how the written language is structured. This is orthographic dyslexia. The orthographic stage as the stage during which a reader has adequate phonological skills and begins to use the words stored in their visual word form area to read previously seen words rapidly. I believe dyslexia can occur when a student fails to make the transition from the phonological stage to the orthographic stage. Their difficulty is understanding the language, not the inability to visually memorize words.

Some students read from left to write, write letters or numbers backwards. Some researchers think that this symptom may indicate a subtype of dyslexia, but most think that it is just a symptom for some students with dyslexia.



Symptoms of Dyslexia

Preschool

A preschool-age child may:

- Talk later than most children.
- Have more difficulty than other children pronouncing words. For example, the child may read aloud "mawn lower" instead of "lawn mower."
- Be slow to add new vocabulary words and be unable to recall the right word.

- Have trouble learning the alphabet, numbers, days of the week, colors, shapes, how to spell, and how to write his or her name.
- Have difficulty reciting common nursery rhymes or rhyming words. For example, the child may not be able to think of words that rhyme with the word "boy," such as "joy" or "toy."
- Be slow to develop fine motor skills. For example, your child may take longer than others of the same age to learn how to hold a pencil in the writing position, use buttons and zippers, and brush his or her [teeth](#).
- Have difficulty separating sounds in words and blending sounds to make words.

Kindergarten through grade 4

Children in kindergarten through fourth grade may:

- Have difficulty reading single words that are not surrounded by other words.
- Be slow to learn the connection between letters and sounds.
- Confuse small words such as "at" and "to," or "does" and "goes."
- Make consistent reading and spelling errors, including:
 - Letter reversals such as "d" for "b."
 - Word reversals such as "tip" for "pit."
 - Inversions such as "m" and "w" and "u" and "n."
 - Transpositions such as "felt" and "left."
 - Substitutions such as "house" and "home."

Grades 5 through 8

Children in fifth through eighth grade may:

- Read at a lower level than expected.
- Reverse letter sequence such as "soiled" for "solid," "left" for "felt."
- Be slow to recognize and learn prefixes, suffixes, root words, and other reading and spelling strategies.
- Have difficulty spelling, and he or she may spell the same word differently on the same page.
- Avoid reading aloud.
- Have trouble with word problems in math.
- Write with difficulty or have illegible handwriting. His or her pencil grip may be awkward, fistlike, or tight.
- Avoid writing.
- Have slow or poor recall of facts.



Professional Help

There are so many programs available today to help children with dyslexia, behavior problems and communication disorders that often parents and teachers are completely baffled as to how to even begin to make the right choices, especially when cost, time and commitment come into play. How do you know what program is best when even the advertising on the web or elsewhere makes every tutor, specialist and program seem like it is THE one. Do the costs among these programs and tutors matter if the child is really struggling?



The best advice is to take an eclectic approach that is based on professional credentials and rooted in knowledge of the individual child. Eclectic means diverse. There are many approaches to helping children but no one approach is for every child. So a student that is a little behind may benefit from a tutoring center that has one program for everyone but pushes that student to the next level. Centers like Kuman Math or Sylvan Learning Center may help, but be aware that these centers do not offer individualized help. Other places offer individualized assistance, but the tutors or instructors may have minimal or no professional qualifications. They may be college students or teachers who know very little about learning problems or behavior issues.

This brings us to professional credentials. If your school has availed itself of our popular PowerPoint presentation, then the staff will already be familiar with the description of public vs private credentials and what that means. In the private sector, there are many professionals and centers that advertise themselves. However, not all of these centers or people are licensed by the state, meaning there is no government oversight, so questions of integrity or outcomes cannot be supervised. In other words, there is no outside way to be certain if what they are saying or doing is useful and whether personnel are appropriate.

It's a gamble.

Costs can vary widely and there is no health insurance coverage. Unlicensed individuals *cannot* bill health insurance, *can* charge varying amounts, and *can* stipulate whatever they want. So, here are some questions to ask every program director, tutor, professional and learning center.

- What are your credentials?
- Are you state licensed?
- Are your tutors licensed?
- Can you help me bill my health insurance?
- How much will you charge per hour?
- How do you know your program/s work? Is there research to back up your claims?
- How do you test for dyslexia and other learning problems?
- How does your testing guide your program and recommendations?



Nutritional Help May Be Oily

[Pediatrics](#)

[May 2005, VOLUME 115 / ISSUE 5](#)

The Oxford-Durham Study: A Randomized, Controlled Trial of Dietary Supplementation With Fatty Acids in Children With Developmental Coordination Disorder

Alexandra J. Richardson, Paul Montgomery

Although this study originally was looking at coordination problems, it also found that if a child is having difficulty reading, rather than hiring a tutor, the solution could lie in fatty acid supplementation. So concludes a new study from the University of Gothenburg in Sweden and published in *The Journal of Child Psychology and Psychiatry*.

The new study suggests taking a supplement with omega-3/6 could improve reading skills in schoolchildren.

The research was led by Mats Johnson, chief physician and researcher at the Gillberg Neuropsychiatry Centre at Sahlgrenska Academy at the university.

He and his colleagues note that previous research has suggested there are positive effects of omega-3 and omega-6 fatty acids in children with inattention and reading difficulties. As such, the team wanted to see if the fatty acids would improve reading ability in mainstream schoolchildren.

Although the human body can make most of the fats it needs from other fats or raw materials, omega-3 and omega-6 are essential fats that the body must acquire from food.

Foods high in omega-3 include fish, vegetable oils, nuts, flax seeds, and leafy vegetables. Meanwhile, most omega-6 fatty acids in the diet are derived from vegetable oils.

Omega-3 oils may not be the whole answer, but certainly good nutrition, including omega-3 oils, may be helpful to a child's overall nutrition.





Contacts

Dr. Kathryn Keithly is a licensed and credentialed educational psychologist with over 10 years of experience. She can be reached through her website at www.kmkpsych.com, and 831-234-4182

Carol Murphy is a licensed and credentialed speech-language pathologist with over 30 years of experience. She can be reached through her website at www.carolmurphy.org And 831-234-4182