

ASSESSMENT AND TREATMENT OF DYSLEXIA IN ADOLESCENTS AND ADULTS: NO ADULTS LEFT BEHIND

How to identify the almost 20 percent of your clients who have reading problems, how it can cause them problems in ways you may not expect and what to do with them

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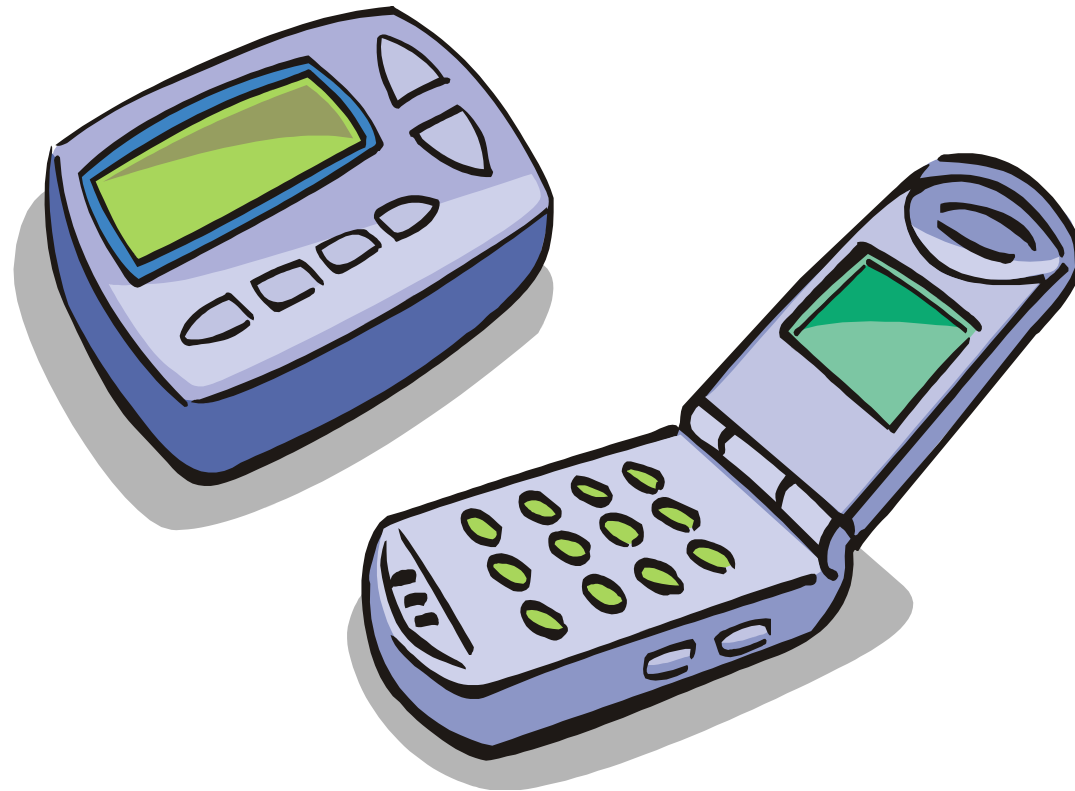


Road Rules: What to expect

- Today's seminar will run from 8:00 to 3:30.
- Lunch will be “on your own” from 11:30 to 12:30.
- Breaks will be 10 minutes at 9:30 and 2:00.
- Please try to hold your questions until Q & A times.



PLEASE TURN OFF YOUR CELL PHONES AND PAGERS



What is “State of the Art”?



- What you have in your PowerPoint handouts may not exactly match mine because something new may have come out since your handouts were printed. Oh, by the way these bicycles **ARE NOT** state of the art.

What is a “Disorder”?



- A disorder is a ***harmful dysfunction*** of a naturally selected mechanism.

Wakefield, J.C. (1999). Evolutionary Versus Prototype Analysis of the Concept of Disorder. Journal of Abnormal Psychology, 108 (3), pp. 374-399.

- It must cause a dysfunction in a trait every human develops and create impairment in a major life activity.

Barkley, R. A. (2002A-Tape 1). ADHD Symposium: Nature, Diagnosis and Assessment- Nature and Comorbidity and Developmental Course of ADHD. University of Massachusetts, January, Westborough, MA: Stonebridge Seminars.

What is a “Developmental Disorder”?

- A disorder characterized by a significant delay in the rate a normal human trait develops in an individual.
- It takes the individual longer to develop this trait than their age peers.

(Barkley, R. A. (2002A-Tape 1). ADHD Symposium: Nature, Diagnosis and Assessment- Nature and Comorbidity and Developmental Course of ADHD. University of Massachusetts, January, Westborough, MA: Stonebridge Seminars.)

What is a “Disability”?



- With adults the term disability has become a legal term of art since the passage of the American's with Disability Act (ADA).
- One must be impaired compared to the Average American.
- Highly Controversial

Gordon, M., and Keiser, S. (Eds.) (1998). Accommodations in Higher Education Under the Americans with Disabilities Act: A No-Nonsense Guide for Clinicians, Educators, Administrators, and Lawyers. New York, NY: Guilford.)

What is a Learning Disability? (Continued)

Civil Rights Definition

1. Section 504
2. ADA
3. Sutton vs. United Airlines



What is a Learning Disability? (Continued)

Civil Rights Definition (Continued)

1. You must be disabled compared to the “Average American” (i.e., I.Q.=100, etc.)
- 2. *ADA is Civil Rights law, NOT entitlement law***
3. “...the Supreme Court has ruled that individuals with impairments, including ADD, learning disabilities and psychiatric disabilities are...

What is a Learning Disability? (Continued)

...excluded from coverage under ADA, if medication or compensatory strategies largely eliminate the impact of those impairments.”

Latham, P.S. , and Latham, P. (Friday October 8, 1999). Personal Communication.
Washington, D.C., 11th Annual CHADD International Conference.

Latham, P.H. and Latham, P. (1999). Who has a disability Under ADA? Attention!, 6 (2), pp. 40-42.

What is a Learning Disability?

“A learning disability is like pornography...it’s hard to define, but you know it when you see it” –Samuel Kirk

Mather, N. (Wednesday, February 26, 2003). “Use and Interpretation of WJIII Discrepancies.”
Paper presented at the 40th Annual Conference of the Learning Disabilities Association,
Chicago, IL, Session W-10.

What Does Neurobiological Mean?

- Stephen Pinker – “The Blank Slate: The Modern Denial of Human Nature”, or better stated, “The Lie of the Blank Slate”.

Pinker, S. (2002). The Blank Slate: The Modern Denial of Human Nature. New York, NY: Viking.)

- “Although learning disabilities may be exacerbated by other variables, such as ineffective teaching strategies or socioeconomic barriers, this paper supports the position that the essence of learning disabilities is neurobiological in nature” (p. 61).

Fiedorowicz, C., et.al. (2001). Neurobiological Basis of Learning Disabilities. Learning Disabilities, 11 (2), pp. 61-74.

What Does Neurobiological Mean? (Continued)

“Of particular relevance to this review is the compelling evidence in support of the neurobiological basis of learning disabilities. Studies employing widely divergent methodologies, e.g. research using genetic analysis, neuroanatomical neuroimaging, electrophysiological recording, pathological analysis of brain tissue at autopsy, and neuropsychological evaluation have yielded highly convergent conclusions in support of a neurobiological etiology” (p. 70).

Fiedorowicz, C., et.al. (2001). Neurobiological Basis of Learning Disabilities. Learning Disabilities, 11 (2), pp. 61-74.

What does “neurobiological” mean?

60% of Reading Disorder-Dyslexia is genetic.

Willcutt, E.G. and Gaffney-Brown, R. (Summer, 2004). Etiology of Dyslexia, ADHD and Related Difficulties: Using Genetic Methods to Understand Comorbidity. Perspectives, 30 (3), pp. 12-15.

I.Q. is 60 to 65% genetic.

Barkley, R. A. (2002A-Tape 1). ADHD Symposium: Nature, Diagnosis and Assessment-Nature and Comorbidity and Developmental Course of ADHD. University of Massachusetts, January, Westborough, MA: Stonebridge Seminars.

WHAT IS A LEARNING DISORDER?



What is a Learning Disability?



- “Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia...

What is a Learning Disability? (Continued)

...The term does not include children who have learning problems which are the primary result of visual, hearing, or motor handicaps, or mental retardation, of economic disturbance, or of environmental, cultural, or economic disadvantage.”

Department of Health, Education, and Welfare, December 29,
1977, p. 65083.



What is a Learning Disorder? (Continued)



“Learning disabilities is a generic term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities, or of social skills. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions ...

What is a Learning Disorder? (Continued)



...(e.g., cultural differences, insufficient or inappropriate instruction, psychogenic factors), and especially attention deficit disorder, all of which may cause learning problems, a learning disability is not the direct result of those conditions or influences.”

Interagency Committee On Learning Disabilities, 1997, p. 222; Adopted by the LEAD
2000 Congress, January 28, 1991, Little Rock, AR.

What is a Learning Disorder? (Continued)



“Learning Disorders are diagnosed when the individual’s achievement on individually administered standardized tests in reading, mathematics, or written expression is substantially below that expected for age, schooling, and level of intelligence. The learning problems significantly interfere with academic achievement or activities of daily living that require reading, mathematical, or writing skills. A variety of statistical approaches...

What is a Learning Disorder (Continued)?

...can be used to establish that a discrepancy is significant. *Substantially below* is usually defined as a discrepancy of more than 2 standard deviations between achievement and IQ. A smaller discrepancy between achievement and IQ (i.e., Between 1 and 2 standard deviations) is sometimes used in cases where an individual's performance on an IQ test may have been compromised by an associated disorder in cognitive processing, a comorbid mental disorder or general medical condition, or individual's ethnic background..."

What is a Learning Disorder? (Continued)



“...If a sensory deficit is present the learning difficulties must be in excess of those usually associated with the deficit. Learning Disorders may persist into adulthood” (pp. 49-50).

American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders—Text Revision (DSM-TR). Washington, DC: American Psychiatric Association.

THE CONTROVERSY OF ADULT AD/HD AND DYSLEXIA: REAL ANSWERS AND SOLUTIONS FOR THERAPISTS

Although 5 percent of our adult population suffers from AD/HD, a neurobiological disorder first recognized in 1902, there continues to be controversies, misunderstandings and myths about this disorder and its treatment. As a result, many adults with AD/HD struggle with chronic difficulties in relationships and in school and in work settings. Without proper treatment, they are at risk for school failure and drop out, career failure, failed marriages, anxiety disorders, affective disorders and substance abuse.



What is the Readability Level of Those Passages?

- Flesch-Kinaid Grade Level=12.0
- The Readability of the New York Times is 13th to 16th grade

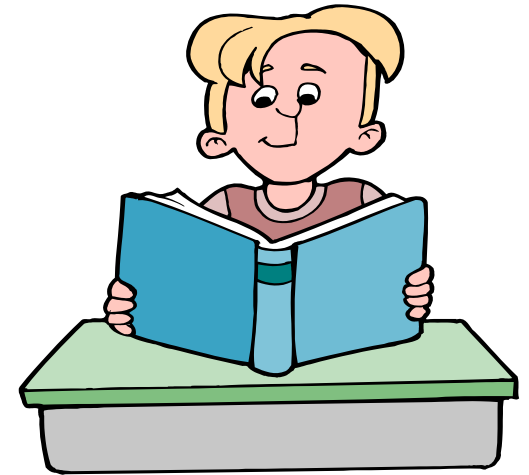
WriteltNow (3/12/04). From website: www.ravensheadservices.com/readability.htm, p. 3.

- Reader's Digest: 9th grade

The English Language Learner KnowledgeBase (3/12/04). From website: www.helpforschools.com/ELLKBase/practitionerships/Fog_Index_Readability.shtml.

- 1 in 5 Americans reads below the 5th grade level and the average American reads at the 8th grade level!

Pfizer Clear Health Communication Initiative (3/12/04). Improving Health Literacy. From website: www.pfizerhealthliteracy.com_fry.html



Readability (continued)

- Could you be ***“Eulexic”***?
 - Margaret Rawson



WHAT IS A READING DISORDER?



What is a Reading Disorder?

DSM-IV, TR

“Diagnostic criteria for 315.00 Reading Disorder

- a. Reading achievement, as measured by individually administered standardized tests of reading accuracy or comprehension, is substantially below that expected given the person's chronological age, measured intelligence and age-appropriate education.

What is a Reading Disorder? (Continued)

- b. The disturbance in Criterion A significantly interferes with academic achievement or activities of daily living that require reading skills.
- c. If sensory deficit is present, the reading difficulties are in excess of those usually associated with it” (p. 53).

American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders—Text Revision (DSM-TR). Washington, DC: American Psychiatric Association.

What is a Reading Disorder? (Continued)

“Dyslexia is one of several distinct learning disabilities. It is a specific language-based disorder of constitutional origin characterized by difficulties in single word decoding, usually reflecting insufficient phonological processing abilities. These difficulties in single word decoding are often unexpected in relation to age and other cognitive and academic abilities; Dyslexia is manifested by variable difficulty with different...

What is a Reading Disorder? (Continued)

.....forms of language, often including, in addition to problems in reading, a conspicuous problem with acquiring proficiency in writing and spelling”.

Definition of Dyslexia as adopted by the Research Committee of the International Dyslexia Association, May 11, 1994 and by the National Institutes of Health, 1994- taken from IDA website:www.interdys.org on July 8, 2002.

What is Dyslexia?

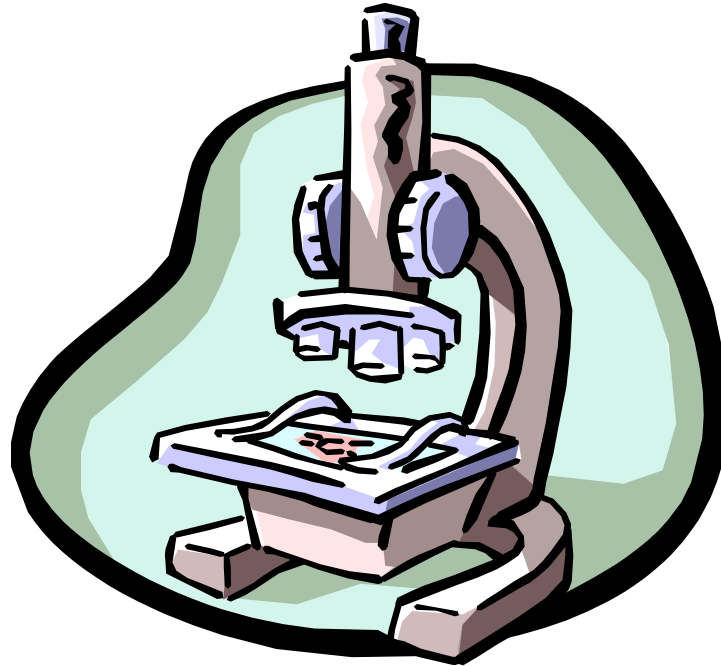
“Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that 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...”

What is Dyslexia (Continued)?

“...experience that can impede growth of vocabulary and background knowledge” (Lyon, Shaywitz and Shaywitz, 2003, p. 2).

Lyon, G.R., Shaywitz, S.E., Shaywitz, B.A. (2003). A Definition of Dyslexia. Annals of Dyslexia, 53, pp. 2-14.

Your Tax Dollars at Work



RESEARCH PROGRAM IN READING DEVELOPMENT, READING DISORDERS, AND READING INSTRUCTION

Initiated 1965

Your Tax Dollars at Work

- Run by the National Institute of Child Health and Development (NICHD)
- Which is part of the National Institute of Health (NIH)
- Study began in 1965 and continues today!
- As of 1999 over **\$150,000,000.00** has been spent!

Your Tax Dollars at Work

- Conducted at 42 sites in the U.S. and Europe
- Follow-up studies of over 14 years!
- Much of the neurological research in this presentation comes from this study.
- China, England, Israel, Russia, Sweden and Turkey have conducted similar studies...

Lyon, G.R. (1999). In Celebration of Science in the Study of Reading Development, Reading Disorders and Reading Instruction. Paper presented at the International Dyslexia Association 50th Annual Anniversary Conference, November 4, 1999, Chicago, IL.

Your Tax Dollars at Work

- 30,000 scientific works from NICHD research
- 44,000 studied, 5 yrs old and up; with 5 year follow-ups
- No Child Left Behind
 - 38 to 40% overall illiteracy rate in U.S.
 - 70% illiteracy/African Americans
 - 65% illiteracy/Hispanic Americans
 - They don't have the English language literacy and speech experiences of other ethnicities.

Lyon, G.R. (Thursday, February 27, 2003). Application of Scientific Research Methods to the Study of Naming Deficits: Systematic Interventions to Improve Fluency in Word Reading Skills and Comprehension. Paper Presented at the 40th Annual Learning Disabilities Association Conference, Chicago, IL, Session T-39.)

Your Tax Dollars at Work

- 48,000 children have been in the study as of 2004. The follow-up study is now 21 years.
- 3,800 in new adult study
- 2 to 6% of the population are the “Hard Core” Dyslexics that will not improve with “Good Instruction”. They have the full dyslexic neurology and need “multisensory approaches”.

Lyon, G.R. (March 19, 2004). A Summary of Current NICHD Research Findings in Math, Reading Development in English Speaking Children and Plans For Future Research. Seminar Presented at the 41st Annual Learning Disabilities Association of America International Conference, Atlanta, Georgia, March 17 to March 20, 2004.

Your Tax Dollars at Work

- 3 to 5% of community samples experience Major Depressive Disorder in lifetime
- Dysthymic Disorder is 3%
- 3 to 13% Social Phobia
- 3 to 5% Generalized Anxiety Disorder
- 0.4 to 1.6% Bipolar Disorder

American Psychological Association (1994). Diagnostic and Statistical Manual of Mental Disorders, IV Edition. Washington, DC: American Psychiatric Association.

Your Tax Dollars at Work

- For the first time school curriculum policy and funding for reading programs will be based on science!
- New reading programs will be researched much like the FDA tests new medications!
- New studies: Adolescent Literacy Project, Adult Literacy Project, Teacher Training

Reading Disorder-Dyslexia

“The idea that learning to read is just like learning to speak is accepted by no responsible linguist, psychologist, or cognitive scientist in the research community” (pp. 285-286).

Stanovich, K.E. (1994). Romance and Reality. The Reading Teacher, 47, pp. 280-291.

THE NEUROLOGY OF READING DISORDER DYSLEXIA



The Neurology of Reading Disorder-Dyslexia

- An irregularity in the cellular architecture of the posterior planum temporal region of Wernike's area in the left temporal lobe
- They have ectopias and dysplasias in far greater numbers
- Results of 9 autopsies of dyslexics

Duane, D.D. (1993). Developmental Disorders of Learning, Attention, and Affect. Videotape prepared by the Institute for Behavioral Neurology, 10201 North 92nd Street, Suite #300, Scottsdale, AZ.

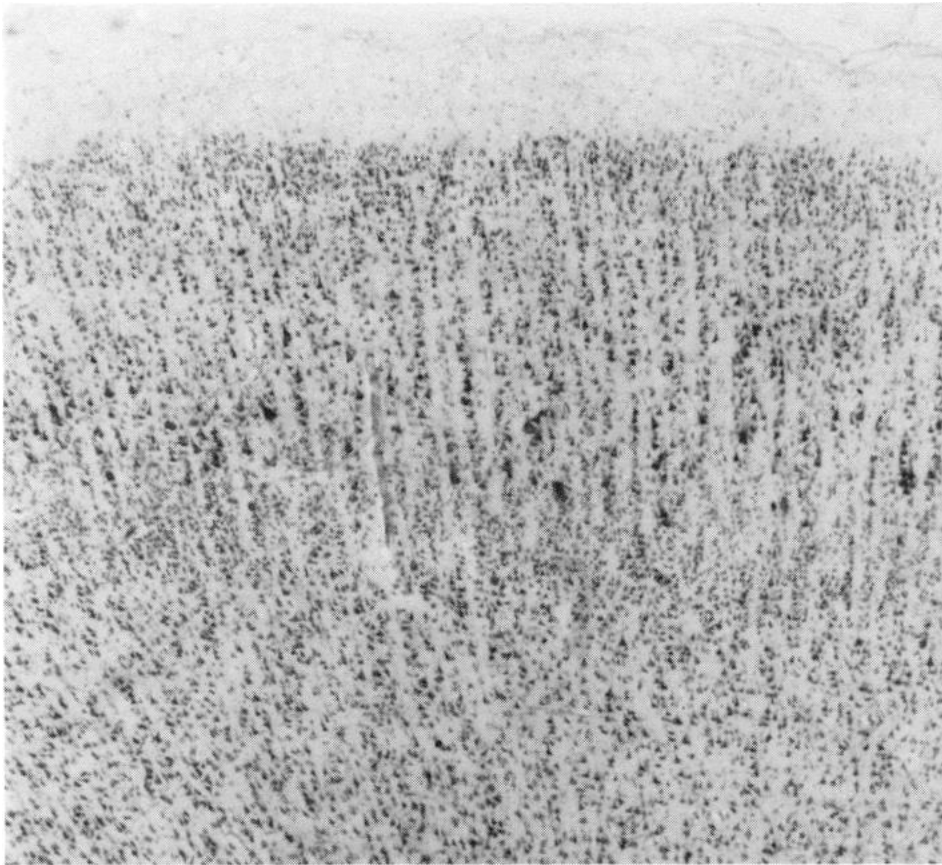
Riccio, C.A., and Hynd, G.W. (1996). Neurological Research Specific to the Adult Population with Learning Disabilities. In N. Gregg, C. Hoy, and A.F. Gay (Eds.), Adults with Learning Disabilities: Theoretical and Practical Perspectives. New York, NY: Guilford, pp. 127-143.

Planum Temporale and Dyslexia

- * 2/3rds of normals have asymmetry of planum temporale (Lt > Rt)
- * Dyslexics' planum Temporale are symmetrical
- * These differences are important as this area is related to one of the functional difficulties of dyslexia—language.

Fiedorowicz, C., et. al. (2001). Neurobiological Basis of Learning Disabilities. Learning Disabilities, 11 (2), pp. 61-74.

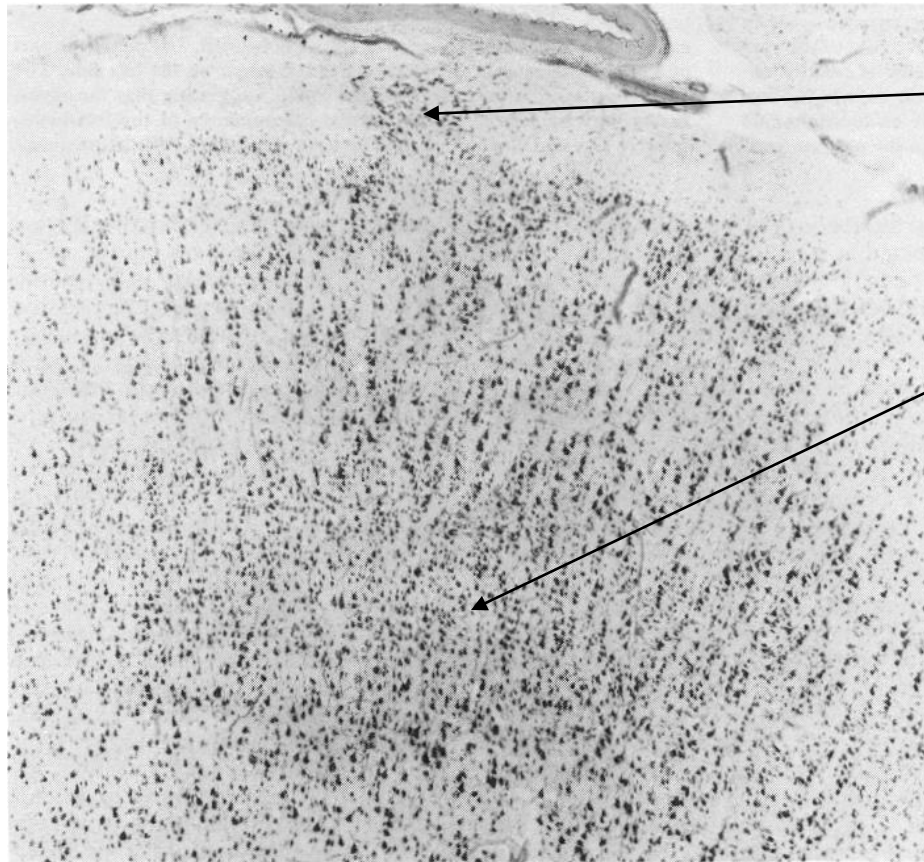
Non-Dyslexic Plenum Temporale



Geshwind, N. (1979).

Specializations of the human brain. The Brain. New York, NY: W.H. Freeman, pp. 108-117—picture on page 116.

Dyslexic Plenum Temporale

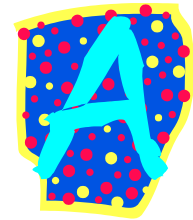


Dysplasia

Ectopia

Geshwind, N. (1979).
Specializations of the
human brain. The Brain.
New York, NY: W.H.
Freeman, pp. 108-117–
picture on page 116.

“Vana may I buy a PHONEME?”



- Smallest part of speech
- 44 in English language
- All words spoken or read must be broken down by the brains phoneme module to be processed remembered, etc.

Shaywitz, S.E. (November, 1996). Dyslexia. Scientific American, 275 (5), p. 98-104.

The Core Phonological Deficit

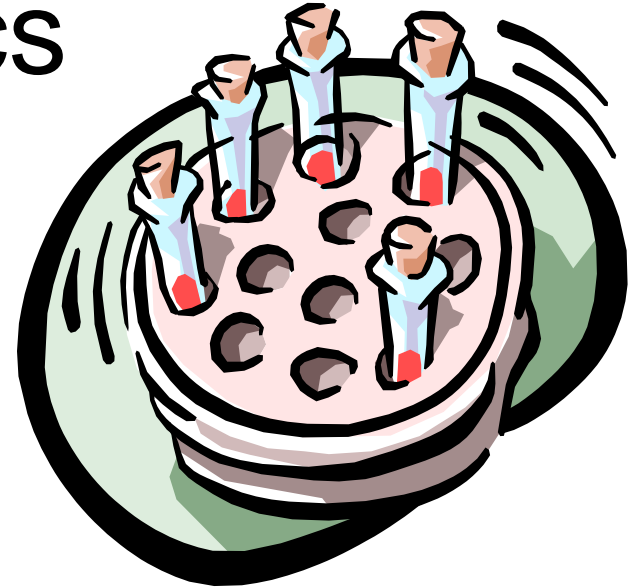
- Phonological deficits continue into adulthood
- Phonological instruction promotes learning to read
- Spelling is poor and reading rate is slow into adulthood—Time pressure make them worse

Pugh, K.R., et. al. (2001). Neurorimaging Studies of Reading Development and Reading Disability. Learning Disabilities Research & Practice, 16 (4), pp. 240-249.

Duane, D. (1991). Dyslexia: Neurobiological and Behavioral Correlates. Psychiatric Annals, 21 (12), pp. 703-716.

Phonemic Awareness and Genetics

- This may be related to anomalies on Chromosome 6
- Single word reading –anomalies on Chromosome 15 (long arm)



Lyon, G.R. (1999). In Celebration of Science in the Study of Reading Development, Reading Disorders and Reading Instruction. Paper presented at the International Dyslexia Association 50th Annual Anniversary Conference, November 4, 1999, Chicago, IL.

Fiedorowicz, C., et. al. (2001). Neurobiological Basis of Learning Disabilities. Learning Disabilities, 11 (2), pp. 61-74.

Other Areas of Brain Symmetry in Dyslexia

- Increased posterior symmetry
- Dyslexics with severe language delay reversed parietal-occipital asymmetry – rt planum > lt
- Dyslexics tend to have a larger right hemisphere than left in adulthood.

Richardson, S.O. (1994). Doctors Ask Questions About Dyslexia: A Review of Medical Research (The Orton Emeritus Series). Baltimore, MD: Orton Dyslexia Society

Filipek, P.A., et.al. (1999). Structural and Functional Neuroanatomy in Reading Disorder. In D.D. Duane (Ed.), Reading and Attention Disorders: Neurobiological Correlates. Baltimore, MD: York, p. 48.)

MORE DYSLEXIA NEUROLOGY



Dyslexia and the Lateral Geniculate Nucleus

“...several studies on low-level visual processing have found that people with dyslexia show visual abnormalities that implicate a deficit in the transient (magnocellular) subdivision of the visual pathway” (p. 81).

Livingstone, M.S. (1999). The Magnocellular/Parietal System and Visual Symptoms in Dyslexia. In D.D. Duane (Ed.), Reading and Attention Disorders: Neurobiological Correlates. Baltimore, MD: York Press, pp. 81-92.

Dyslexia and the Lateral Geniculate Nucleus

- The Magnocellular system appears to be slower in some dyslexics.
- The Magnocellular system transmits arrangement and shape of words and letters—sight reading.
- The Parvocellular system transmits details of letters and syllables.

Richardson, S.O. (1994). Doctors Ask Questions About Dyslexia: A Review of Medical Research (The Orton Emeritus Series). Baltimore, MD: Orton Dyslexia Society

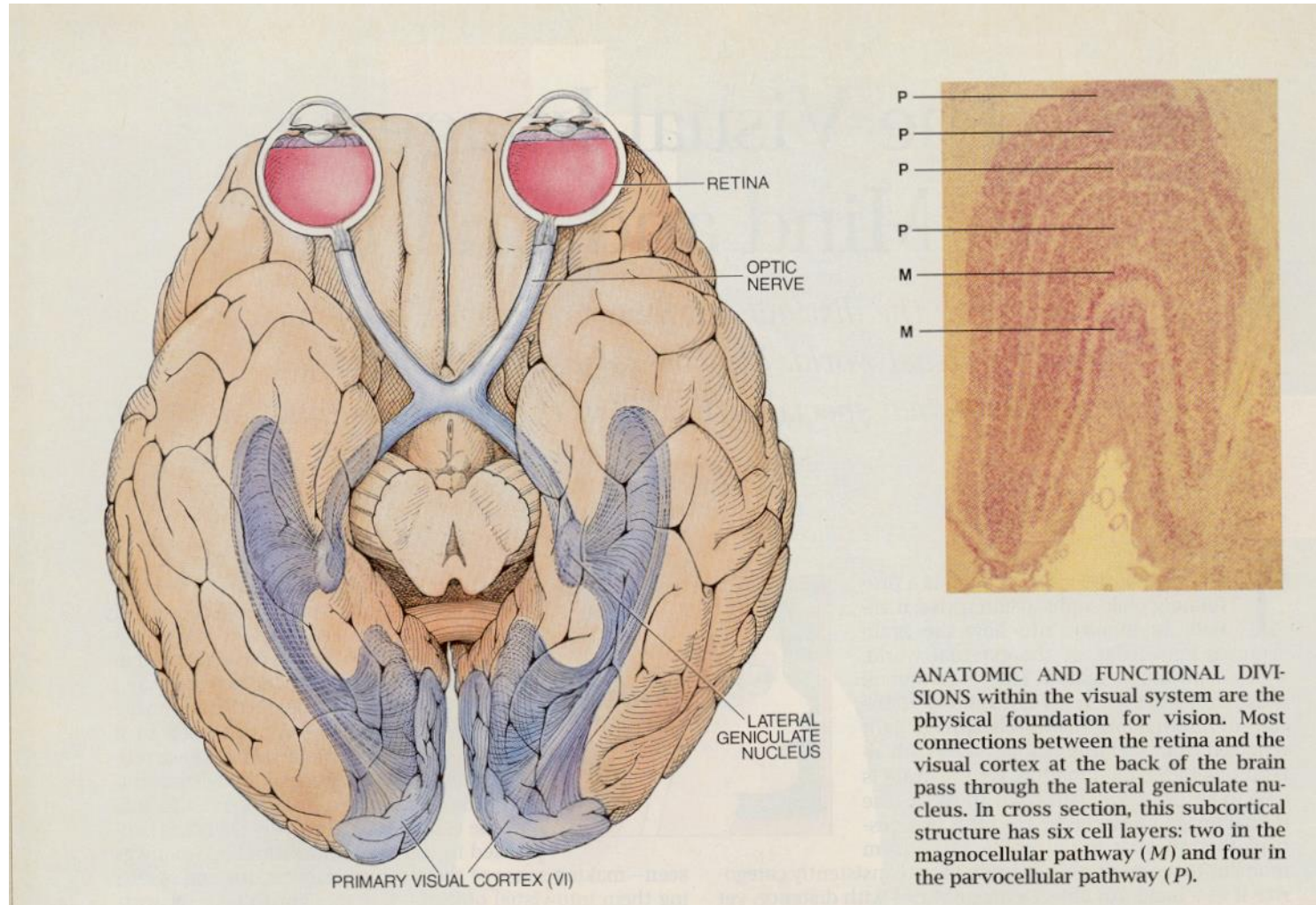
Dyslexia and the Lateral Geniculate Nucleus

Research has demonstrated that dyslexics are slower at processing both visual and auditory information.

Richardson, S.O. (1994). Doctors Ask Questions About Dyslexia: A Review of Medical Research (The Orton Emeritus Series). Baltimore, MD: Orton Dyslexia Society.

Lateral Geniculate Nucleus

Zeki, S. (September, 1992). The Visual Image In the Mind and Brain. Scientific American: The Mind and Brain (Special Issue), 267 (3), p. 70.



The Double Deficit Hypothesis

- Rapid Automatized Naming (RAN)
- Some dyslexics have phonological and word attack problems only.
- Some dyslexics have RAN and comprehension deficits only.
- Some have both phonological deficits and RAN and thus have the “Double Deficit”
 - These are the most seriously impaired and hardest to habilitate.

Wolf, M., and O'Brien, B. (2001). On Issues of Time, Fluency, and Intervention. In A.J. Fawcett (Ed.), Dyslexia: Theory and Good Practice. Philadelphia, PA: Whurr, pp. 124-140.

The Triple Deficit Hypothesis

“*Orthographic dyslexia* refers to a problem with the acquisition of decoding or encoding skills that is caused by difficulty with rapid and accurate formation of word images in memory” (p. 239).

Roberts, R., and Mather, N. (1997). Orthographic Dyslexia: The Neglected Subtype. Learning Disabilities Research & Practice, 12 (4), pp. 236-250.

The Triple Deficit Hypothesis

“In a synthesis of Samuel T. Orton’s work, June Orton...explained that for some students, visual memory is sufficient enough to recognize the printed word in reading, but not strong enough to recall the image of the word to reconstruct it for spelling” (p. 244).

Roberts, R., and Mather, N. (1997). Orthographic Dyslexia: The Neglected Subtype. Learning Disabilities Research & Practice, 12 (4), pp. 236-250.

The Triple Deficit Hypothesis

Those with Orthographic Processing deficits:

- Have difficulty recalling sight words (i.e., was, etc.)
- Are slow to develop fluency and automaticity
- Have difficulty storing mental representations of words
- Rely on phonics for reading and produce misspellings that are phonemically regular for sight words

Roberts, R., and Mather, N. (1997). Orthographic Dyslexia: The Neglected Subtype. Learning Disabilities Research & Practice, 12 (4), pp. 236-250.

The Triple Deficit Hypothesis



Anomalies on Chromosome 2 are related to problems in orthographic processing in dyslexics.

Lyon, G.R. (1999). In Celebration of Science in the Study of Reading Development, Reading Disorders and Reading Instruction. Paper presented at the International Dyslexia Association 50th Annual Anniversary Conference, November 4, 1999, Chicago, IL.

DYSLEXIA AND THE CEREBELLUM



Dyslexia and The Cerebellum

Fawcett and Nicolson reported research that dyslexic children have significant problems with phonology, working memory, speed of information processing, balance and motor skills. With the exception of phonology the remaining symptoms can be attributed to cerebellar problems.

Fawcett, A.J., Nicolson, R.I. (2001). Dyslexia and The Role of The Cerebellum. In A.J. Fawcett (Ed.), Dyslexia: Theory & Good Practice. Philadelphia, PA: Whurr, pp. 89-105.

Dyslexia and The Cerebellum

80% of dyslexics show signs of cerebellar problems!

Fawcett, A.J., Nicolson, R.I. (2001). Dyslexia and The Role of The Cerebellum. In A.J. Fawcett (Ed.), Dyslexia: Theory & Good Practice. Philadelphia, PA: Whurr, pp. 89-105.

Dyslexia and The Cerebellum

- Automaticity is the problem!
- When multitasking and rapid processing are needed
- Thinking is a frontal lobe function
- It is a problem of fluency
- “...fluency is in essence the ability to repeat previous actions or thoughts more and more quickly without conscious thought” (p. 101).

Fawcett, A.J., Nicolson, R.I. (2001). Dyslexia and The Role of The Cerebellum. In A.J. Fawcett (Ed.), Dyslexia: Theory & Good Practice. Philadelphia, PA: Whurr, pp. 89-105.

Dyslexia and The Cerebellum

Nicolson Said Bottom Line:

“...That means if you have a task that takes 4 hours for the non-dyslexic kid to learn, it will take twice as long for the dyslexic kid; 8 hours. But, it's not linear. You have a task which takes 100 hours it will take 10 times as long. If you have a task that takes 10,000 hours it will take 100 times as long, and so on...Therefore if you have something like reading, writing and spelling which takes 100s...”

Dyslexia and The Cerebellum

“...of hours that’s the sort of thing in which dyslexic children are particularly adversely affected.”

Nicolson, R., and Fawcett, A. (November, 2000). Dyslexia The Cerebellum and Phonological Skill . Paper presented at the International Dyslexia Association Annual Conference, Washington, DC.

Dyslexia and Procedural Training

- The ***Square Root Rule:***

“The extra time needed for a dyslexic child to master a task is proportional to the square root of the time a non-dyslexic child takes” (Slide 45).

Fawcett, A. (November 5, 2004). Dyslexia and Learning. Paper presented at the 55th International Dyslexia Conference, Philadelphia, PA, from handout of slides, Number 45.

Definition of Dyslexia

“Dyslexia is a specific learning disability that is neurological 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...”

Definition of Dyslexia Continued

“...problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.”

Adopted by the National Institutes of Health (NIH) and the International Dyslexia Association (IDA) 2002

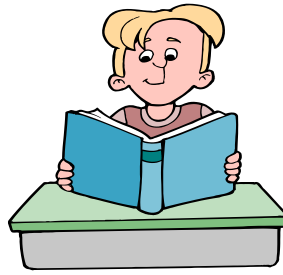
International Dyslexia Association (April 20, 2005). IDA/NIH Adopts A New Definition of Dyslexia. From website:

www.interdys.org/serlet/compose?section_id=8&page_id=69, Page 1 Of 2

THE PAOMNNEHAL PWEOR OF THE HMUAN MNID

- **Aoccdrnig to rscheearch at
Cmabrigde Uinervisy, it deosn't
mttaer in waht oredr the ltteers in a
wrod are, the olny iprmoatnt tihng is
taht the frist and lsat ltteer be in the
rghit pclae. The rset can be a taotl
mSES and you can sitll raed it
wouthit a porbelm.**

“LEXDEXIA”



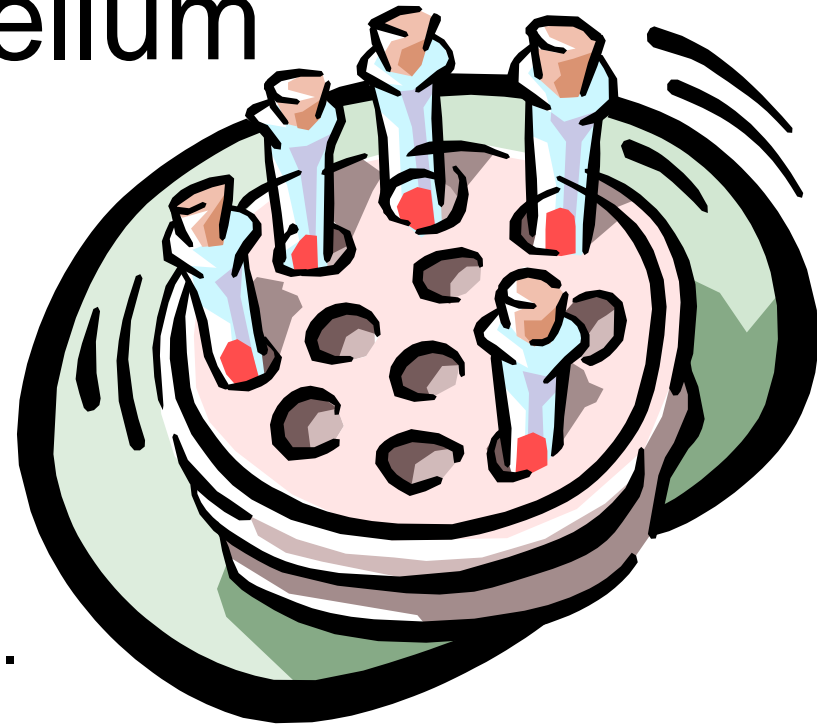
- “reversals” (seeing “was” as “saw”) and “rotations” (“b” as “p”; “p” as “d”, etc.) occurs in most children up to forth grade. Visual orthographic memory development
- Only about 7% of adult dyslexics have this concern.
- ***Dyslexia is not seeing the word “WAS” as “SAW”.***

Anderson, C.W., Jr. (January 23, 2006). Personal Communication.

Badian, N. A. (2005). Does a Visual-Orthographic Deficit Contribute to Reading Disability? Annals of Dyslexia, 55 (1), pp. 28-52.

Dyslexia and the Cerebellum

Anomalies on Chromosome 15 are related to problems with automaticity in dyslexics.



Lyon, G.R. (1999). In Celebration of Science in the Study of Reading Development, Reading Disorders and Reading Instruction. Paper presented at the International Dyslexia Association 50th Annual Anniversary Conference, November 4, 1999, Chicago, IL.

SYMPTOMS OF DYSLEXIA



Reading Disorder-Dyslexia

The Symptoms of Dyslexia are:

- 1. Weak Phonemic Awareness*
- 2. Slow Rapid Automatized Naming*
- 3. Poor Orthographic Processing*
- 4. Exceptionally Poor Automatization*
- 5. Poor Coordination*

Fawcett, A.J. (2001). Dyslexia: Theory & Good Practice. Philadelphia, PA: Whurr.

Blake, K.. (2003) Personal Observation.



Weaknesses in LD College Students

- Cognitive Efficiency
- Auditory Processing
- Phonemic Awareness
- Working Memory
- Same level of Information as Non-LD



Noel Gregg, Ph.D. University of Georgia

Dyslexia and Gender

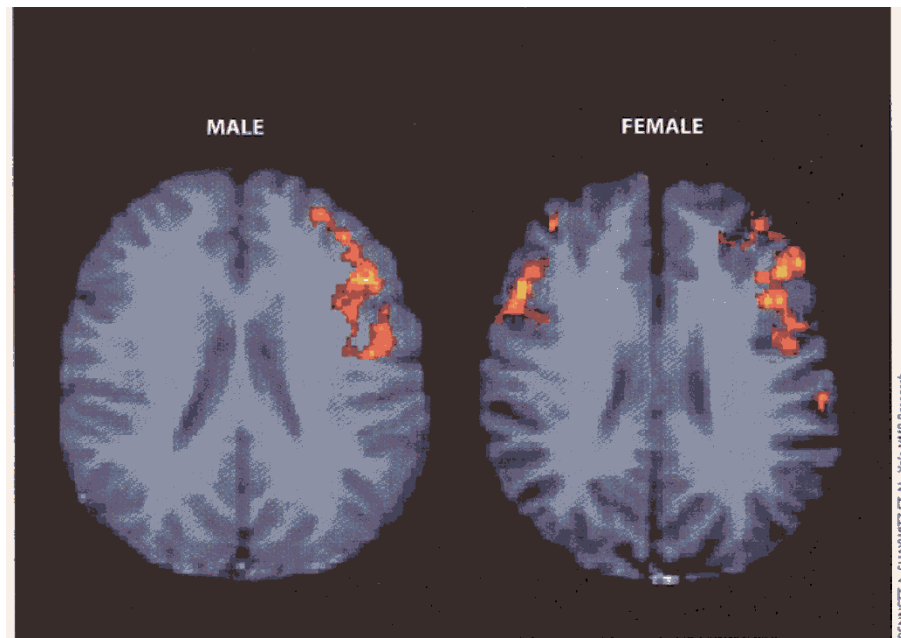


- Sally Shaywitz (1996) reported:
 - ◆ Women's brains appear to have bilateral phonological processing.
 - ◆ This may explain why women tend to have fewer language deficits after left brain strokes.
 - ◆ It may also explain why more women than men compensate for dyslexia

Shaywitz, S.E. (1996). Dyslexia. Scientific American, 275 (5), pp. 98-104.

Phonological Processing in Men and Women.

Shaywitz, S.E. (November, 1996). Dyslexia. Scientific American, 275 (5), p. 104.



The Stages of the “Normal” Reading Process

1. “The Phoneme Producer”
(Left Inferior Frontal Gyrus)
2. “The Word Analyzer”
(Left Parieto-Temporal Region)
3. “The Automatic Detector”
(Left Occipito-Temporal Region) (P. 57).

Gorman, C. (July 28, 2003). The New Science of Dyslexia. Time, 162 (4), pp. 52-59.

The Stages of the “Normal” Reading Process

- *Left Inferior Frontal Gyrus*
 - Helps to vocalize words
 - Analyzes phonemes
 - Most active in Beginning Readers

Gorman, C. (July 28, 2003). The New Science of Dyslexia. Time, 162 (4), pp. 52-59.

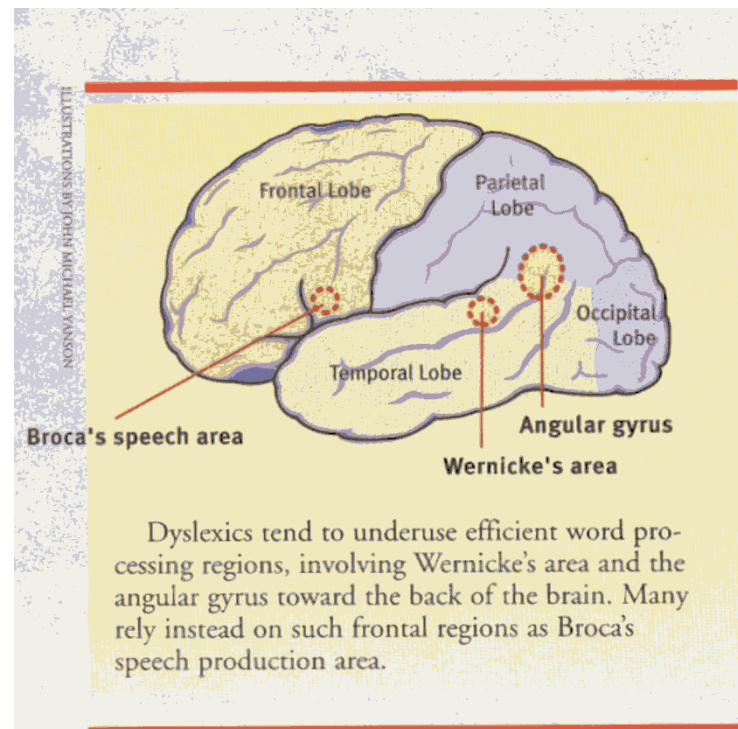
How do Dyslexics Read?

- As dyslexics mature they tend to over activate the Left Frontal Broca's region.
- This allows them to subvocalize what they read (The Broca's region is responsible for vocalization).
- They slowly “move” their way through reading.

Shaywitz, S. (2003). Overcoming Dyslexia. New York, NY: Knopf.

The Brain and Dyslexia

Murray, B. (March, 2000). From the Brain to Lesson Plan. Monitor On Psychology, 31 (3), p. 24.



Why Don't Dyslexics Get Better with Age?

- “The identical posterior disruption is observed in children and adults—neurologic proof that the problems do not go away. They are persistent, and now we know why.” (p. 82).

Shaywitz, S. (2003). Overcoming Dyslexia. New York, NY: Knopf.

Why Don't Dyslexics Get Better With Age?

- Dyslexics also use an auxiliary system for reading in the Right Frontal lobe that allows for accurate, but slow reading.

Shaywitz, S. (2003). Overcoming Dyslexia. New York, NY: Knopf.

Are there Dyslexics in other Languages?

- Yes!
- Languages with less complex phonemically regular languages (i.e., Italian) will have dyslexics with less severe reading disorder symptoms, than English or French.
- However “...the neurologic mechanisms of dyslexia are similar regardless of native language” (p. 44).

Geller, B. (May, 2001). Dyslexia: A Disease Without a Country. Journal Watch: Psychiatry, 7 (5), p 44.)

DIAGNOSING DYSLEXIA



Diagnosing Dyslexia

“The converging evidence reviewed here indicates clearly that I.Q. – Achievement discrepancies are invalid diagnostic markers for LD in reading skills. Such a discrepancy simply does not differentiate a poor reader with average to above intelligence from a poor reader whose intelligence is commensurate with his or her low reading ability” (Lyon, 1996, p. 24).

Lyon, G.R. (1996). The State of Research. In S.C. Cramer and W. Ellis (Eds.), Learning Disabilities: Lifelong Issues. Baltimore, MD: Brookes, pp. 3-61.

Diagnosing Dyslexia: Dispelling the Myth of the DSM-IV,TR

- None of the NICHD research supports this method.
- Unfortunately, before research could be done the method became the “Law of The Land”.
- What is in the DSM-IV, TR is based on an **INCORRECT GUESS THAT WAS MADE OVER 35 YEARS AGO, NOT ON RESEARCH**

Lyon, G.R. (May 5, 1997). Personal Communication.

Screening By Clinicians

- Adult Dyslexics:
 - May hide reading problems.
 - May spell poorly; rely on others to correct spelling.
 - Avoid writing; may not be able to write.
 - Rely on memory; may have an excellent memory.
 - Often have good “people skills”.

Screening By Clinicians

- Often are spatially talented...
- May be good at reading people...
- Are often in jobs working well below their intellectual capacity.
- May have difficulty with planning, organization and management of time, materials and tasks
- Often are entrepreneurs” (p. 1 of 1).

(3/6/2003). Common Signs of Dyslexia: Adults. The International Dyslexia Association
Website: www.interdys.org/servlet/compose?section_id+5&page_id+44

Dyslexia Screening Methods for Clinicians

NONSENSE PASSAGES

Once upon a time a tawndy rapsig named Gub found a tix of pertollic asquees. So chortlich was he with his discovery that he murtled a handful to show Kon, a cagwitzpat. "Pagool!" cried Kon. "With these you could treeple a frange!" "No," smiled Gub, "I think I'll just paible a catwicine."

The traphestal difference between the bafister jacepot and the torquial wexid lies in the function of the dighton. In the former, the dighton scelliates the waudey, while in the latter it unhoves the eutone. Still, miastic similarity between the two cannot be deflayed.

Gross-Glenn, K., Jallad, B., Novoa, L., Helgren-Lempesis, & Lubs, H.A. (1990). Nonsense Passage Reading as a Diagnostic Aid in the Study of Adult Familial Dyslexia. *Reading and Writing: An Interdisciplinary Journal*, 2, 161-173.

Dyslexia Screening Methods for Clinicians

- A Dictated Spelling test like that in the WRAT-III
 - Don't use for diagnostic purposes-just screening!
 - Don't use any form of WRAT Reading Test
- Look for phonetically irregular spellings
- Ask about school history with reading!
- If they have “Trouble” refer them for a complete Psychoeducational Evaluation.



Diagnosing Dyslexia

- Educational Testing Service, Policy Statement for Documentation of a Learning Disability in Adolescents and Adults, January 1998, Office of Disability Policy, Educational Testing Service, Princeton, NJ.
- Most scholastic aptitude tests (i.e., ACT, SAT, GRE, MCAT, LSAT, etc.) have documentation guidelines.
- Most post-secondary institutions have them too.
- Some work environments may have them.

Diagnosing Dyslexia



It is strongly suggested that you contact the student disability services at the post secondary institutions your documentation will be sent to for a copy of their learning disabilities documentation guidelines before you conduct the evaluation. Most tend to follow the AHEAD Guidelines. Specifically ask how recent the documentation needs to be, what tests are expected, if a clinical interview needs to be done, and what are the qualifications needed of the evaluator.

Diagnosing Dyslexia

The process of evaluating and diagnosing dyslexia:

- Core question: “Why is this person having trouble?”
 - Information gathering
 - Screening
 - Psychological testing
 - Help develop self-understanding
 - Action Taking-Accommodations, etc.

Kirk, J., McLoughlin, D., and Reid, G. (2001). Identification, and Intervention in Adults. In A. Fawcett (Ed.), Dyslexia: Theory and Good Practice. Philadelphia, PA: Whurr, pp. 292-308.

Diagnosing Dyslexia

- The diagnostic evaluation for Dyslexia and Learning Disorders in adults can begin the therapeutic process. It can be therapeutic in and of itself.

Roffman, A.J. (2000). Meeting the Challenge of Learning Disabilities in Adulthood.
Baltimore, MD: Paul H. Brookes.

Diagnosing Dyslexia

EVALUATE FOR THE COMMON SYMPTOMS OF DYSLEXIA:

- Poor Phonemic Awareness
- Poor Rapid Automated Naming (RAN)
- Poor Orthographic Processing
- Poor Automatization
- Poor Coordination

Diagnosing Dyslexia

Most post-secondary institutions require/accept:

- Intellectual-WAIS-III
- Cognitive-Woodcock-Johnson, Third Edition-Tests of Cognitive Abilities
- Achievement- Woodcock-Johnson, Third Edition-Tests of Achievement
- A thorough history and clinical interview
- A screening/evaluation for comorbidities
- * This would be a good model for employment and legal evaluations

Diagnosing Dyslexia

Optional Tests (Check with institution first)

- Intellectual-Stanford-Binet Intelligence Scales, Fifth Edition (SB5), Kaufman Adult Intelligence Test (KAIT)
- Cognitive/Memory-Wechsler Memory Scales, Third Edition (WMS-III)
- Achievement-Wechsler Individual Achievement Test-II (WIAT- II), Nelson-Denny Reading Test (NDRT), Scholastic Abilities Test for Adults (SATA)
 - Criterion Referenced Tests: Gallistel-Ellis Test of Coding Skills

Diagnosing Dyslexia

Optional Tests (Continued)

- Language Processing-Lindamood Auditory Conception Test-Revised (LACT-R); Comprehensive Test of Phonological Processing (CTOPP); Boston Naming Test; Test of Adolescent and Adult Language-Third Edition (TOAL-3)
- Neuropsychological Screening- Trails A and B of the HRNTB; Quick Neurological Screening Test, Second Edition (QNST-2)

Diagnosing Dyslexia

Psychoemotional Screening

- Symptom Checklist 90- Revised
- Beck Depression Inventory-II
- Beck Anxiety Inventory
- Beck Suicide Survey
- Test Anxiety Inventory

Diagnosing Dyslexia

For Special Occasions Psychoemotional Screening

- MMPI-2 with Taped Version
- MCMI-III with Taped Version
- Structured Clinical Interview (SCID)

I.Q. and Setting

- People of all levels of intellect may be dyslexic.
- Ackerman, et. al. wrote, “115 used to be considered the lower limit for probability of success in college” (p. 76).
- **Make sure your client has sufficient intellect for their work/educational environment!**

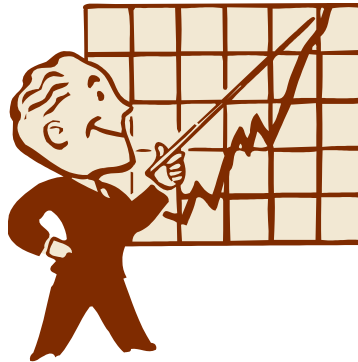
Moats, L.C. (1999). Basic Facts About Dyslexia, Part II: What Every Professional Ought to Know (The Orton Emeritus Series). Baltimore, MD: The International Dyslexia Association.

Ackerman, P.T., McGrew, M.J., and Dykman, R.A. (1987). A Profile of Male and Female Applicants for a Special College Program for Learning-Disabled Students. Journal of Clinical Psychology, 43, pp. 67-78.

Discrepancy Formulas



Discrepancy Formulas



The best way to diagnose dyslexia **MAY** be a Listening Comprehension-Achievement discrepancy.

Lyon, G.R. (May 5, 1997). Personal Communication.

Discrepancy Formulas

- Reauthorization of IDEA did not require IQ; may lose some valuable information
- Interability discrepancies will be important in new IDEA for diagnosis
- Canada stopped using IQ discrepancies years ago

Mather, N. (Wednesday, February 26, 2003). "Use and Interpretation of WJIII Discrepancies". Paper presented at the 40th Annual Conference of the Learning Disabilities Association, Chicago, IL, Session W-10.

Discrepancy Formulas

Young dyslexics may have a significant IQ-Achievement discrepancy, but they do not read as much as their non-disabled peers (reading is laborious and boring to them). As a result they don't have as much information about the world and their vocabulary and information scores go down with age. Often to the point there is no IQ-Achievement discrepancy.

Mather, N. (Wednesday, February 26, 2003). "Use and Interpretation of WJIII Discrepancies". Paper presented at the 40th Annual Conference of the Learning Disabilities Association, Chicago, IL, Session W-10.

Discrepancy Formulas

- I suggest using all of the the above coupled with well informed clinical impression and extensive history for the best results.
- When legal issues are involved may also need to use IQ/Achievement discrepancy and “The Average American”/Achievement discrepancy.

Reading Levels and Jobs

- **Functional Level:** Early Primary School
- **Vocational Level:** Late Primary School-basic needs of jobs with moderate reading requirements
- **Technical Level:** Lower High School-Technical or Trade School occupations
- **Professional Level:** College-Professional Training

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). The Adult Dyslexic: Assessment Counseling and Training. San Diego,CA: Singular.

Diagnosing Dyslexia

- **LEARN THE DOCUMENTATION
GUIDELINES FOR LEARNING
DISORDERS**



- Association on Higher Education and Disability (AHEAD) (1997). Guidelines for Documentation of a Learning Disability in Adolescents and Adults. Available from: AHEAD, P.O. Box 21192, Columbus, OH 43221-0192; Voice: 614-488-4972; Web: www.ahead.org

- ***HOW TO
TEACH
ADULT
DYSLEXICS
TO READ***



How to Help Dyslexic Adults with Reading



National Reading Panel

Panel of government funded experts released a report to United States Congress (April 13, 2000)

- Reviewed over 100,000 reading research articles published since 1966
- 10 to 15 percent of dyslexics will drop out of high school
- 2 percent will graduate college

How to Help Dyslexic Adults with Reading



National Reading Panel

- First teach phonemic awareness (rhyming, clapping out word sounds, etc.)
- Second teach phonics (sound to symbol)
- Third teach Whole Language
- In this order with dyslexics

National Reading Panel (4/13/2000). www.nichd.gov/publications/pubs/readbro.htm

How to Help Dyslexic Adults with Reading



“Although the NICHD research indicates that there is no cure for RDD (sic-Reading Disorder-Dyslexia), many RDD adults can improve their reading skills by remediation with a systematic-synthetic multisensory-phonics technique. For example the adult with RDD is asked to look at a phoneme (one of the 44 sounds of the English language in letter form), make the sound of the phoneme (i.e., B-”b”) and then with their fingers...

How to Help Dyslexic Adults with Reading



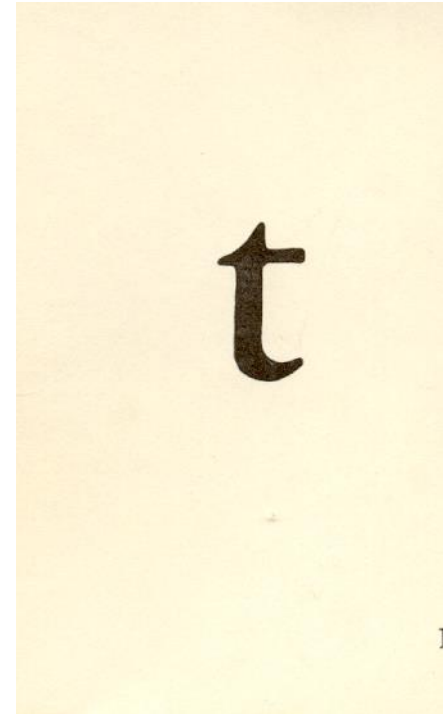
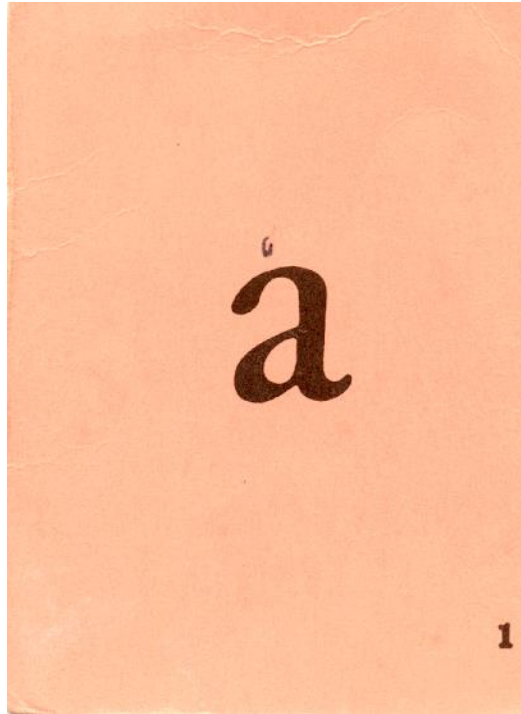
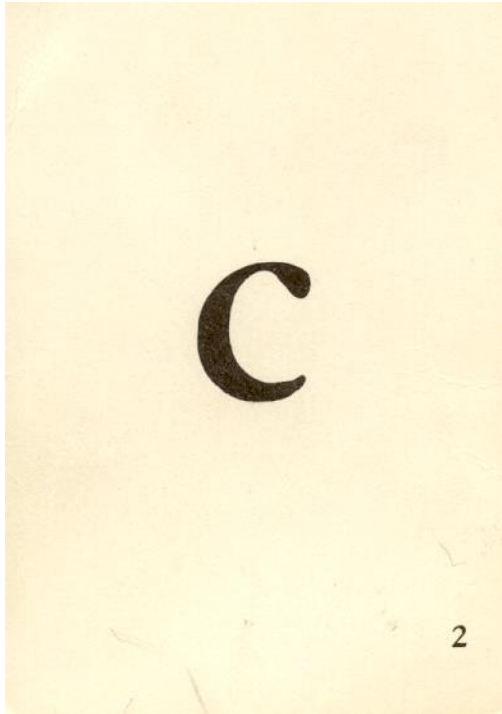
...trace the letter as they look at it and say its sound. This 'see it-say it-trace it' technique has been quite successful in teaching those with RDD to read. Perhaps the best known of these teaching methods is the Orton-Gillingham. However, there are over 10 other systematic-synthetic-multisensory-phonics techniques that are equally helpful" (p. 31).

Blake, K.T. (May/June, 2000). Two Common Reading Problems Experienced by Many AD/HD Adults. Attention!, 6 (5), p. 30-33.

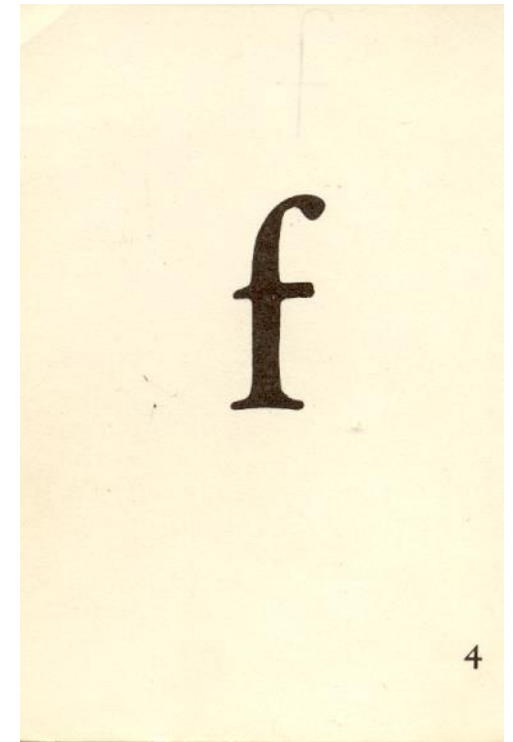
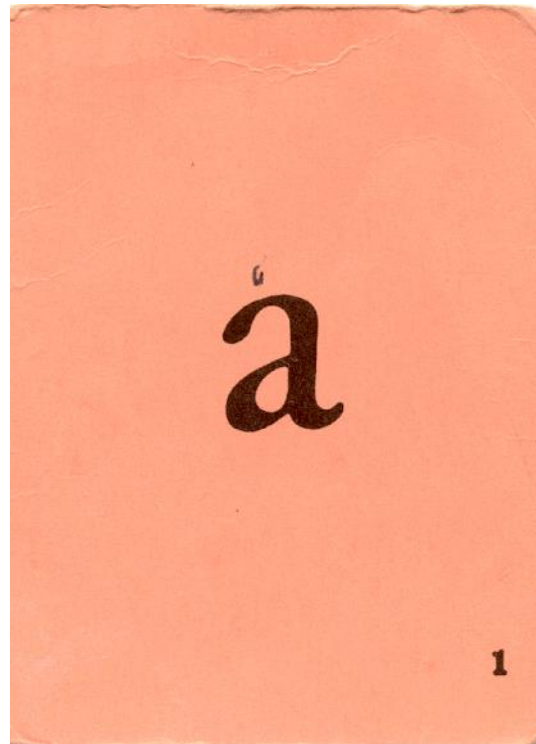
Demonstration



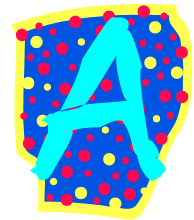
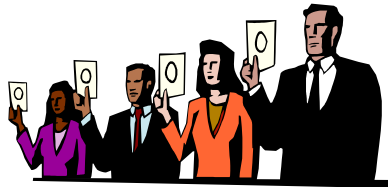
Demonstration



Demonstration



How To Help Dyslexic Adults with Reading



“More advanced readers are given multisensory training in prefixes, root words and suffixes. For example, the adult has a written prefix presented to them; they look at it, say it and trace it. These techniques require substantial drill” (p. 30).

Blake, K.T. (May/June, 2000). Two Common Reading Problems Experienced by Many AD/HD Adults. Attention!, 6 (5), p. 30-33.

Demonstration

therm-

Demonstration

- therm-
 - [heat, temperature]
 - » thermometer, thermostat

Demonstration

act

Demonstration

- act
 - [do]
 - action, react, transaction

Demonstration

-ed

Demonstration

- ed
 - [action, completed]
 - » Directed selected, hurried

Demonstration

act

-ed

Demonstration

ACTED

Demonstration

- [do, completed]

Multisensory Teaching Techniques

- Orton-Gillingham Approach
- Alphabetic Phonics
- Association Method
- Language!
- Lexia-Herman Method
- Lindamood-Bell

International Dyslexia

Association (2005).

Framework for Informed Reading and Language Instruction: Matrix of Multisensory Structured Language Programs.

Baltimore, MD:

International Dyslexia Association.

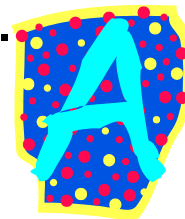


Multisensory Teaching Techniques (Continued)

- Project Read
- Slingerland
- Sonday System
- Sounds in Symbols
- Spalding Method
- Starting Over
- Wilson Foundations & Wilson Reading

International Dyslexia

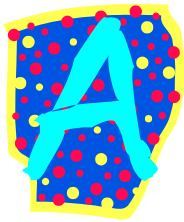
Association (2005).
Framework for Informed
Reading and Language
Instruction: Matrix of
Multisensory Structured
Language Programs.
Baltimore, MD:
International Dyslexia
Association.



Is There Any Evidence That Using Synthetic Multi-Sensory Phonics Works with Dyslexics?

- *YES!*
- Shaywitz (2003) wrote of research where dyslexic children were taught with Multi-sensory Phonics for a year matched the brain patterns of children who were good readers. They became fluent and accurate readers.

Shaywitz, S. (2003). Overcoming Dyslexia. New York, NY: Knopf.



Multisensory Teaching of Dyslexics

- Brain Imaging studies have demonstrated that with intense phonological training dyslexics can process as well as non-dyslexics, but this does not improve spelling and reading rates of dyslexics.
- Non-activation of the left insula during reading may be related to the lack of verbal efficiency in dyslexics.

Berninger, V.W., Abbot, R.D., Abbot, S.P., Graham, S, and Richards, T. (January/February, 2002). Writing and Reading: Connections Between Language by hand and Language by Eye. Journal of Learning Disabilities. 35 (2), pp. 39-56.

Where Can You Find Those That Teach Reading This Way?

- International Dyslexia Association

8600 La Salle Road, Suite 382

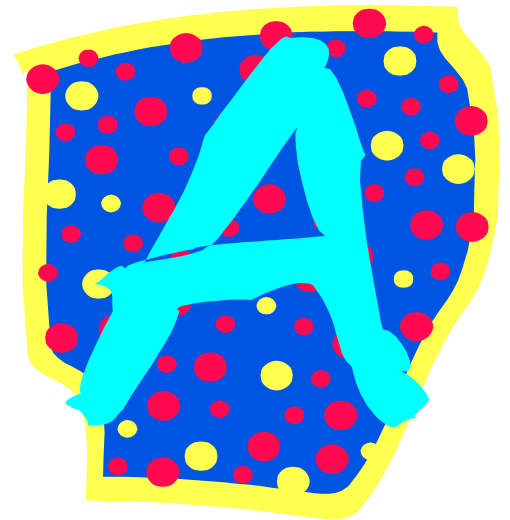
Baltimore, MD 21286-2044

Phone: 410-321-296-0232

Fax: 410-321-5069

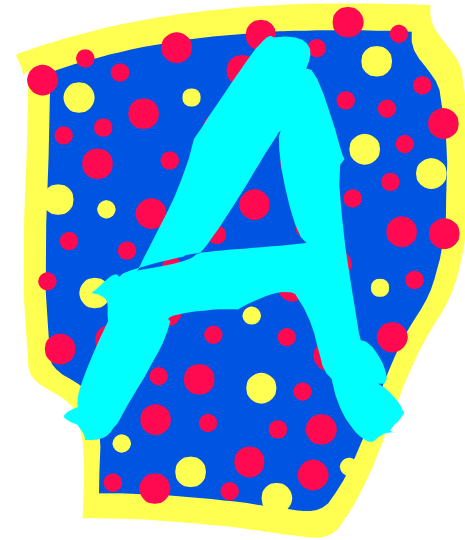
Web: www.interdys.org

E-mail: info@interdys.org



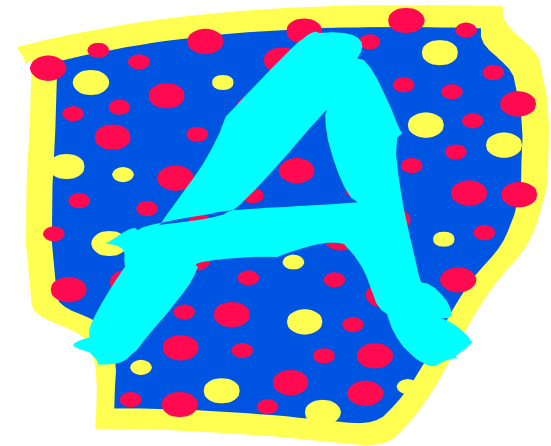
Where Can You Find Those That Teach Reading This Way?

- Learning Disabilities Association of America
4156 Library Road
Pittsburgh, PA 15234
Phone: 412-341-1515
Web: www.ldanat.org

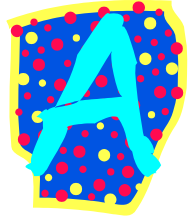


Where Can You Find Those That Teach Reading This Way?

- American Speech-Language Hearing Association
10801 Rockville Pike
Rockville, MD 20852
Voice: 800-638-8255
TTY: 301-897-0157
Fax: 301-897-7355
Web: www.asha.org



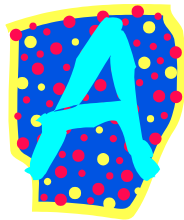
Where Can You Find Those That Teach Reading This Way?



- Vocational Educational Services in your state
- Many “world class” hospitals (i.e., Mayo Clinic, etc.) have LD clinics
- Universities with special education programs
- Private schools that specialize in teaching dyslexics (i.e., Landmark University, etc.)
- Association of Educational Therapists, 1804 West Burbank Blvd., Burbank, CA 91506; Phone: 800-286-4267; Fax: 818-843-7423; aet@aetonline.org

Where Can You Find Those That Teach Reading This Way?

- International Multisensory Structured Language Education Council (IMSLEC), Suite 346, 1118 Lancaster Drive, North East, Salem, OR 97301-2933



TYPICAL READING CURRICULUM USED IN PUBLIC SCHOOLS



What is Whole Language?



- “Reading is part of the integrated language system linked to oral and written forms of language” (p. 402).
- “Both oral and written language are acquired through natural usage” (p. 402).
- “The use of authentic literature provides abundant opportunities for expressive literacy—or writing” (p. 404).

What is Whole Language?



- **Avoid the teaching of separate non-meaningful parts of language or the use of isolated exercises and drills...** The whole-language philosophy maintains that only meaningful materials should be used for instruction and that the sound-symbol relationships of the printed language (phonics) will be naturally and incidentally mastered as children learn to read and write meaningful whole messages” (p. 405).

Lerner, J. (1997). Learning Disabilities: Theories, Diagnosis, and Teaching Strategies. New York, NY: Houghton Mifflin.

Demonstration

What is Whole Language?



- All the above research indicates why Dyslexics should not be taught to read this way until they break the code!
- The **National Reading Panel Report** indicates Dyslexics can benefit from “exposure to literature” after they crack the code!
- It also indicates that corral reading and being read to is helpful.

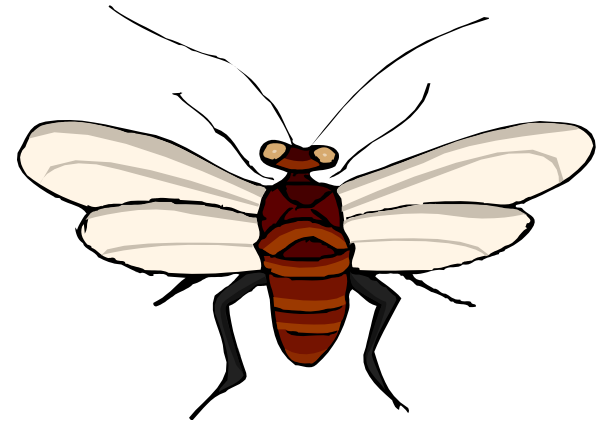
COMPLIMENTARY AND ALTERNATIVE MEDICINE AND DYSLEXIA



Alternative and Integrative Medicine Treatments of AD/HD & LD

“We should all eat dung, because a thousand flies can’t be wrong!”

Russell Barkley, Ph.D.



Barkley, R.A. (1998). ADHD in Children, Adolescents, and Adults: Diagnosis Assessment and Treatment. New England Educational Institute, Cape Cod Symposia, August, Pittsfield, MA.

Controversial Treatments for Dyslexia

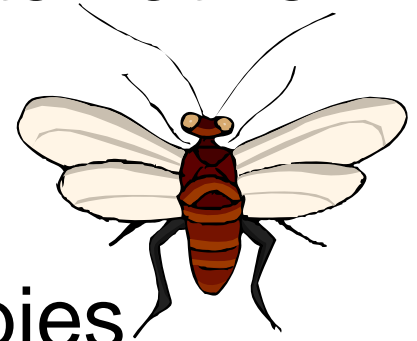
When to question if a treatment is legitimate:

- when no research in peer-reviewed journal is available;
- when they say, “traditional medicine,etc.” refuses to accept what they are saying;
- if most professionals would not use the method; and
- when the person pushing the treatment says, “...prove me wrong... (p.4).

Silver, L. (Summer, 2001). Controversial Therapies, Theme Editor’s Summary. Perspectives, 27 (3), pp.1 and 4.

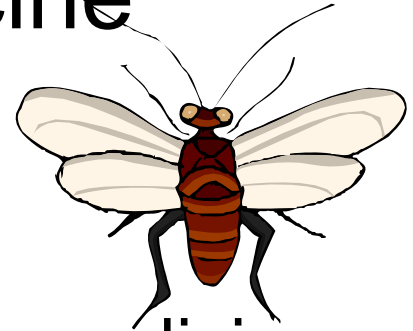
Alternative and Integrative Medicine Treatments of AD/HD & LD

- 56% of those with Anxiety use alternative treatments.
- 53% with Depression
- 16% of hospital offer CAM therapies
- Highest rates used by those with serious and debilitating conditions



Dittmann, M. (June, 2004). Alternative Health Care Gains Steam. Monitor On Psychology, 35 (6), pp. 42-44.

Alternative and Integrative Medicine Treatments of AD/HD & LD

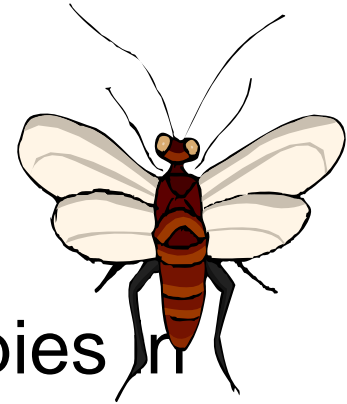


- “Today’s complementary and alternative medicine is tomorrow’s mainstream, but first it must meet with rigorous scientific evaluation.”
- –Alan Leshner, Ph.D., National Advisory Council for Complementary and Alternative Medicine and CEO of the American Association for the Advancement of Science (p. 44).

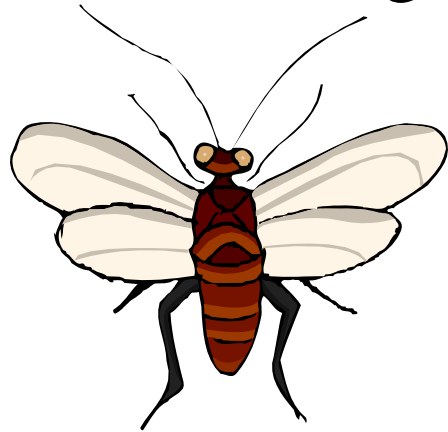
Dittmann, M. (June, 2004). Alternative Health Care Gains Steam. Monitor On Psychology, 35 (6), pp. 44.

Alternative, Integrative & Complementary Medicine and LD and AD/HD

- December 2003 edition of **Attention!** Available from CHADD.
- CHADD's National Resource Center
- www.MyADHD.com
- Rappaport, L.A., & Kemper, K.J. (2003). Complimentary and Alternative Therapies in Childhood Attention and Hyperactivity Problems. Developmental and Behavioral Pediatrics, 24, pp. 4-8.
- Silver, L. (Summer, 2001). Controversial Therapies, Theme Editor's Summary. Perspectives, 27 (3), pp.1 and 4.



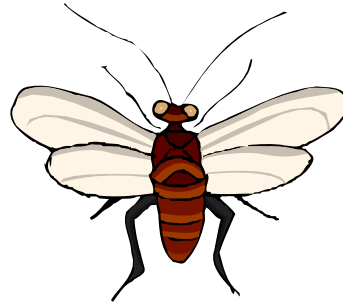
Places to Check Out “New” Treatments for AD/HD and LD



- Ingersoll, B., and Goldstein, S. (1993). Attention-Deficit Disorder and Learning Disabilities: Realities Myths and Controversial Treatments. New York, NY: Doubleday.

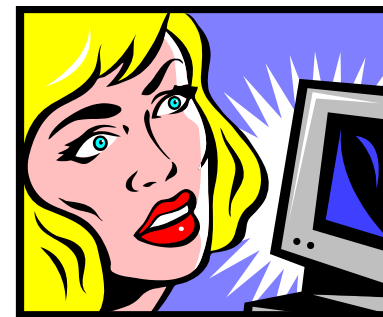
- www.quackwatch.com
- Cochrane Collaboration:
www.cochrane.org

Places to Check Out “New” Treatments for AD/HD and LD



- www.interdys.org
- www.chadd.org
- Cook, P. (1997). Knowledge is Power: Guidelines for Being an Informed Health Care Customer. Attention!, 4 (2), pp. 14-17.
- Arnold, L.E. (2002). Contemporary Diagnosis and Management of Attention-Deficit/Hyperactivity Disorder. Newtown, PA: Handbooks in Health Care.
- Author (May, 2004). Dangerous Supplements: Still at Large. Consumer Reports, 69 (5), pp. 12-17.

Irlen Syndrome/Scotopic Sensitivity Syndrome



Helen Irlen (1991) the “discoverer” of Scotopic Sensitivity Syndrome (SSS) wrote, “Individuals with SSS perceive the world around them in a distorted way as a result of a sensitivity to certain wavelengths of light...for some reading problems are most noticeable when a individual tries to read black characters on white paper” (p. 1).

Irlen, H. (1991). Reading By The Colors: Overcoming Dyslexia and Other Reading Disabilities Through The Irlen Method. Garden City Park, NY: Avery.

Irlen Syndrome/Scotopic Sensitivity Syndrome



- Irlen speculated these problems were caused by difficulties in the retina.
- She believes that relief from SSS can be had through the use of specially treated colored plastic overlays and glasses with specially colored lenses.
- She stresses the use of natural and/or incandescent lighting not florescent for reading and other activities.

Irlen, H. (1991). Reading By The Colors: Overcoming Dyslexia and Other Reading Disabilities Through The Irlen Method. Garden City Park, NY: Avery.

Irlen Syndrome/Scotopic Sensitivity Syndrome



- 50% of those tested for SSS should receive the diagnosis
- 7 different overlay colors
- Screening results interpreted at Irlen Center in Long Beach, CA to determine filter color
- How this is done is a trade secret
- Franchises available
- Frequent re-evaluations are necessary

Helveston, E. (Summer, 2001). Tinted Lenses. Perspectives, 27 (3), pp. 12-13.

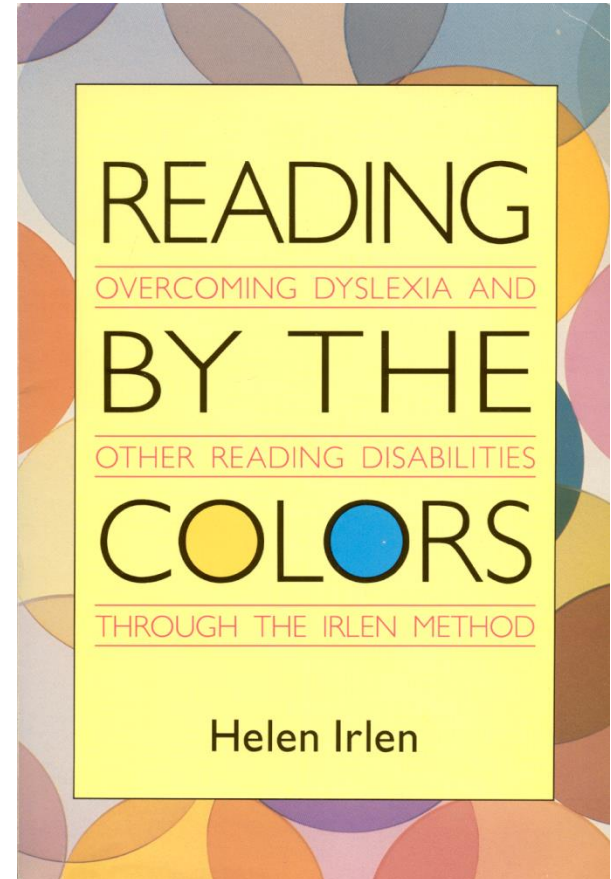
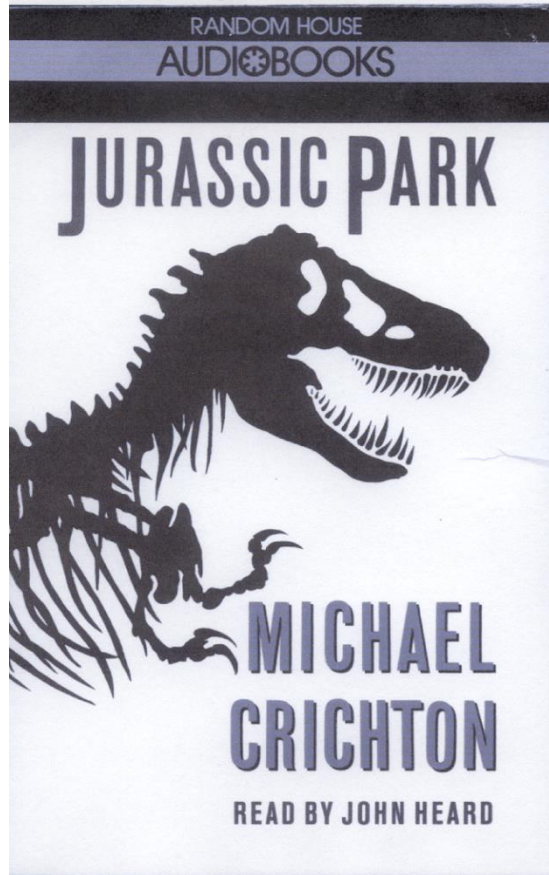
Irlen Syndrome/Scotopic Sensitivity Syndrome



Some believe the recent discovery of smaller magnocellular cells in the lateral geniculate nucleus of dyslexics demonstrates the validity of Irlen's claims.

Jordan, D.R. (2002). Overcoming Dyslexia In Children, Adolescents, and Adults. Austin, TX: Pro-ED.

T. Rex vs. H. Irlen

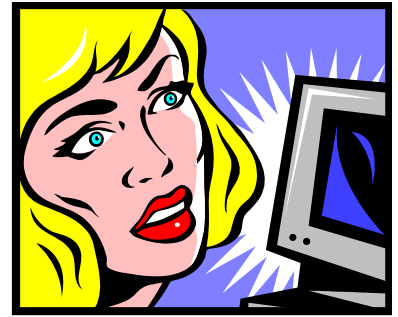


Irlen Syndrome/Scotopic Sensitivity Syndrome



- Primates have 2 or 3 subdivisions of their visual system.
- They are largely segregated throughout the visual system.
- “...The magno system is fast, has high contrast sensitivity, is color blind, and has slightly lower acuity than the parvo division, which is slower, responsive to color, contrast and much lower in contrast sensitivity...”

Irlen Syndrome/Scotopic Sensitivity Syndrome



- “...the magno system carries information about motion and stereopsis...The parvo system seems to be concerned with color perception and object recognition” (pp. 83-84).
- “...it should not be surprising that the magno system is capable of what seems to be the essential functions of vision for an animal that uses vision to navigate in its environment, catch prey, and avoid predators (pp. 84-85).

Irlen Syndrome/Scotopic Sensitivity Syndrome



“I specifically propose that the symptom of words jumping around on the page during reading occurs because the identification of words is carried by the ventral pathway, but the spatial remapping that must occur with each saccade is done by the dorsal pathway, which is not fast enough to remap the image as fast as eyes move during reading” (p. 89).

Livingstone, M.S. (1999). The Magnocellular/Parietal System and Visual Symptoms in Dyslexia. In D.D. Duane (Ed.), Reading and Attention Disorders: Neurobiological Correlates. Baltimore, MD, pp. 81-92.

Irlen Syndrome/Scotopic Sensitivity Syndrome



Question:

How does using a colored plastic overlay or colored filter “help” a system that is blind to color?

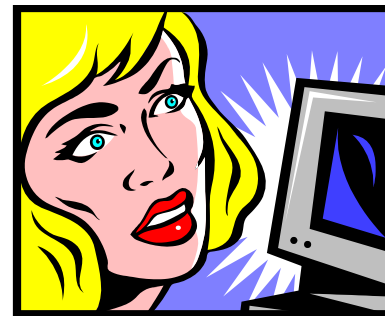
Irlen Syndrome/Scotopic Sensitivity Syndrome



Problems said to be helped by Irlen filters:

- Head injuries
- Concussions
- Whiplash
- Perceptual problems
- Neurological impairment
- Memory loss
- Language deficits
- Headaches

Irlen Syndrome/Scotopic Sensitivity Syndrome



- Autoimmune disease
- Fibromyalgia
- Macular degeneration
- Cataracts
- Retinitis pigmentosa, complications from LASIK and radial keratotomy
- Depression
- Chronic anxiety

Helveston, E. (Summer, 2001). Tinted Lenses. Perspectives, 27 (3), pp. 12-13.

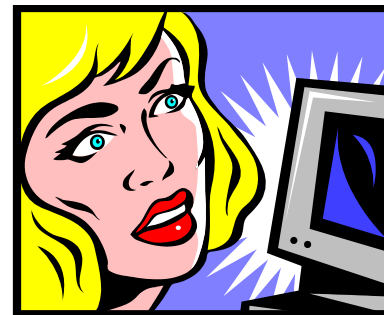
Irlen Syndrome/Scotopic Sensitivity Syndrome



- “Lazy eye” (p. 4).
- Borderline Personality Disorder (p. 1 and 10)
- AD/HD (p. 1 and 11)
- Autism and Asperger’s Disorder (p. 7)-**Maybe**
- Multiple Sclerosis (p. 6)
- Chronic Fatigue Syndrome

(February-July, 2001). Irlen institute for Perceptual and Learning Development International Newsletter, XI (1).

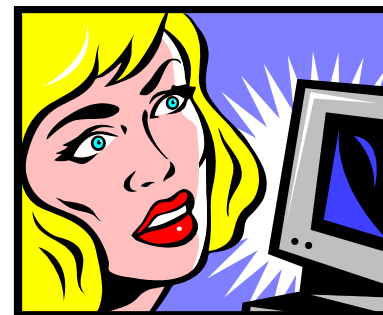
Irlen Syndrome/Scotopic Sensitivity Syndrome



“The journals noted immediate improvement in many of the areas typically associated with TBI, such as speech, motor coordination, body tremors, headaches, seizure activity, word retrieval, communication ability, and significant reduction in anxiety and irritability” (p. 9).

Irlen, S. (August, 2002-January, 2003). Irlen Syndrome in Individuals With Traumatic Brain Injuries. Irlen Institute for Perceptual Learning Development International Newsletter, XII (2), pp. 1 and 9.

Irlen Syndrome/Scotopic Sensitivity Syndrome



“Thus far, the longer that head injury clients wear their Irlen Colored Filters, the greater their ability to function normally cognitively, behaviorally and academically, indicating that color may, in fact, allow healing to take place by calming down the brain and reducing the central nervous system” (p. 9).

Irlen, S. (August, 2002-January, 2003). Irlen Syndrome in Individuals With Traumatic Brain Injuries. Irlen Institute for Perceptual Learning Development International Newsletter, XII (2), pp. 1 and 9.

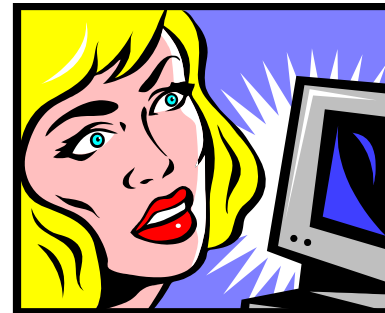
Irlen Syndrome/Scotopic Sensitivity Syndrome



“Despite enthusiastic testimonials from patients who have been treated by Irlen lenses, there is no scientific reproducible or consistent evidence that the lenses actually produce anything more than a placebo effect” (p. 205).

Ingersoll, B., and Goldstein, S. (1993). Attention-Deficit Disorder and Learning Disabilities: Realities, Myths and Controversial Treatments. New York, NY: Mainstreet Books.

Irlen Syndrome/Scotopic Sensitivity Syndrome



- Most testing services do not consider Irlen overlays or filters a legitimate accommodation.
- ETS will allow them because they are not intrusive.

Brinkerhoff, L.C. (1998). Policy Development and Implementation: Next Steps for the New Decade. Paper presented at the Post-Secondary Learning Disabilities Institute, Portland, ME, June 10-13, 1998.

IS THERE ANYTHING ELSE?



Other Reading Problems



- Reading Disorder of Whole Word Decoding
- Reading Disorder of Recall /Comprehension
- Reading Disorder of Oral Reading-Word Finding//Paralexia
- Reading Disorder-Hyperlexia
- Reading Epilepsy
- Aphasia/Alexia/Acquired Dyslexia
- Linguistic Coding Difference (Foreign Language)
- Reading Disorder-Reversals (“was” as “saw”) and Rotations (“b” processed as “p”)
- Depression/Anxiety caused Reading Comprehension and Rate Problems

EMOTIONAL OVERLAY



Emotional Overlay and Learning Disorders

- Seigel (1974) concluded that the most common problems for LD adults are social/emotional.
- Roffman (2000) wrote “It is difficult to grow up with LD and experience repeated failure and relentless taunting from peers without secondary psychological issues often referred to as *emotional overlay*. Emotional overlay does not always develop into diagnosable mental health problems..., but the symptoms can be quite debilitating nonetheless” (p. 44).

Seigel, E. (1974). The Exceptional Child Grows Up. New York, NY: W.H. Freeman.

Roffman, A.L. (2000). Meeting the Challenge of Learning Disabilities in Adulthood. Baltimore, MD: Paul H. Brookes.

Emotional Overlay and Learning Disorders

- Roffman (2000) stated adults Dx late in life are those most at risk for emotional overlay.
- Very little has been written on how to counsel the LD adult.

Roffman, A.L. (2000). Meeting the Challenge of Learning Disabilities in Adulthood. Baltimore, MD: Paul H. Brookes.

Wren, C. and Einhorn, J. (2000). Hanging by a Twig: Understanding and Counseling Adults with Learning Disabilities and ADD. New York, NY: W.W. Norton.

LD Life Insight

Therapeutic goal:
Change “being LD” to
“having LD”.

Rodis, P. (2001). Forging Identities, Tackling Problems, and Arguing with Culture: Psychotherapy with Persons Who Have Learning Disabilities. In P. Rodis, A. Garrod, and M.L., Boscardin (Eds.), Learning Disabilities & Life Stories. Boston, MA: Allyn and Bacon, pp. 205-230.



Comorbidity and Learning Disorders

- Most of the literature on LD and comorbidity is anecdotal and the definition of LD is not consistent.
- LD adults continue to have difficulty with their disabilities into adulthood. Social and emotional problems dominate their lives.

Hooper, S.R., and Olley, J.G. (1996). Psychological Comorbidity in Adults with Learning Disabilities. In N. Gregg, C. Hoy, and A.F. Gay (Eds.), Adults With Learning Disabilities: Theoretical and Practical Perspectives. New York, NY: Guilford, pp. 162-183.

Hoy, C., and Manglitz, E. (1996). Social and Affective Adjustment of Adults with Learning Disabilities: A Lifespan Perspective. In N. Gregg, C. Hoy, and A.F. Gay (Eds.), Adults With Learning Disabilities: Theoretical and Practical Perspectives. New York, NY: Guilford, pp. 208-2312.

Comorbidity and Learning Disorders

- Porter and Rourke studied a large group of LD children from ages 6 to 15 and found:
 - Approximately 44% had no emotional problems.
 - Approximately 26% were depressed, anxious, shy, or suffered low self-esteem.
 - Approximately 17% had Conduct Disorder
- Hence 56% of LD individuals have comorbidities

Porter, J.E., and Rourke, B.P. (1985). Socioemotional Functioning of Learning Disabled Children: A Subtype Analysis of Personality Patterns. In B.P. Rourke (Ed.), Neuropsychology of Learning Disabilities: Essentials of Subtype Analysis. New York, NY: Bruner/Mazel, pp. 218-235.

Comorbidity and Learning Disorders

- LD children with behavioral and emotional problems are more likely to have the same problems in adulthood.
- The more comorbidities a LD person has the more negative outcomes he/she will have.

Goldstein, S. (1997). Managing Attention and Learning Disorders in Late Adolescence and Adulthood: A Guide for Practitioners. New York, NY: John Wiley and Sons.

Comorbidities of Dyslexia

- AD/HD 40%
- Conduct Disorder 20%
- Depression 20%
- Generalized Anxiety 25%
- At Least One Comorbidity 60%

Willcutt, E.K. and Gaffney-Brown, R. (Summer, 2004). Etiology of Dyslexia, ADHD, and Related Difficulties: Using Genetic Methods to Understand Comorbidity. Perspectives, 30 (3), pp. 12-15.

Depression and LD

NORMAL FORMS OF DEPRESSION

1. “The Blues”- Less than two weeks of depressed mood associated with an environmental event.
 - * Ratey and Johnson spoke of “Shadow Syndromes” which appear as, “...behavior that fits only part of a syndrome or disorder, but not all” (p. 13).

Ratey, J.J., and Johnson, C. (1997). Shadow Syndromes. New York, NY: Pantheon.

Normal Depression and LD

2.. Bereavement – The normal grief reaction to a traumatic life event (i.e. death of a loved one, being diagnosed with a disorder, etc.).

- * Symptoms: Loss of interest in things one typically finds pleasurable, depression, sluggishness, problems with sleep and/or appetite, guilt, suicidal thoughts.

- * Complicated Bereavement- includes the above symptoms with a Major Depressive Episode.

Grief and LD

Goldstein spoke of adults with LD and/or AD/HD who struggle with prolonged grief. “It has been suggested that adults with AD/HD and LD struggle with grief over their perceived incompetence and a lifetime difficulty with meeting everyday expectations” (p. 260).

Goldstein, S. (1997). Managing Attention and Learning Disorders in Late Adolescence and Adulthood: A Guide for Practitioners. New your, NY: John Wiley and Sons.

Grief and AD/HD

Murphy and LeVert wrote of the stages of coping with being diagnosed AD/HD (seems to apply to LD also):

Stage 1- Relief and Optimism

Stage 2- Denial

Stage 3- Anger and Resentment

Stage 4- Grief

Stage 5- Mobilization

Stage 6- Accommodation

Murphy, K.R., and LeVert, S. (1995). Out of the Fog. New York, NY: Hyperion.

The LD/AD/HD “Identity”

Rodis offered the ***Seven Stages of Identity Formation for Persons with LDs:***

1. The Problem-Without-A-Name Stage
2. Diagnosis
3. Alienation
4. Passing

Identity (Continued)

5. Crisis and Reconfrontation

6. “Owning and Outing”

7. Transcendence

Rodis, P., Garrod, A., and Boscardin, M.L. (2001). Learning Disabilities and Life Stories. Boston, MA: Allyn and Bacon.

How to Document a Psychiatric Disability for Accommodations

(July, 2001). Guidelines for Documentation of Psychiatric Disabilities in Adolescents and Adults. Office of Disability Policy Educational Testing Service, Princeton, NJ 08541

LD Life Insight



“It is a common trait among the LD to know how to endure hardship and keep dark secrets” – Oliver Queen

Kegan, R. (2001). Easing a World of Pain: Learning Disabilities and the Psychology of Self-Understanding. In P. Rodis, A. Garrod, and M.L. Boscardin (Eds.), Learning Disabilities & Life Stories. Boston, MA: Allyn and Bacon, p. 194.

LD and Low Self-Esteem

- “Reasonably assume that most individuals with learning disabilities have had a more difficult course and are more likely to experience feelings of low self-esteem” (p. 24).
- “However, when the dyslexic succeeds, he is likely to attribute his success to luck. When one fails, he simply sees himself as stupid” (p. 9).

Goldstein, S. (1998). Emotional Problems In Adults with Learning Disabilities.: An Often Unseen but Not Insignificant Problem. LDA Newsbriefs, 33 (4), p. 24.

Ryan, M. (1994). The Other Sixteen Hours: The Social and Emotional Problems of Dyslexia. Baltimore, MD: Orton Dyslexia Society.

LD, Low Self-Esteem and Anxiety

- No difference was found between the levels of self-esteem, academic anxiety and trait anxiety between large groups of LD and non-LD college students.

Blake, K.T. (1989). Self-Esteem and Anxiety in Learning Disabled and Non-Learning Disabled College Students. Dissertation Abstracts International.

LD and Dysthymic Disorder

- Having Dysthymic Disorder is the best predictor of future Depressive episodes and psychosocial concerns.

Spenser, et. al. (2000). Attention-Deficit/Hyperactivity Disorder with Mood Disorders. In T.E. Brown (Ed.), Attention-Deficit Disorders and Comorbidities in Children, Adolescents, and Adults. Washington, DC: American Psychiatric Press, pp. 79-124.

LD and Dysthymic Disorder

- “For some adults with LD, a seeming inability to understand why life continues to be a struggle creates a tragic and self-perpetuating cycle of Loneliness and Despair” (p. 72).
- “...the sheer day-to-day effort required of individuals with LD can be exhausting and dispiriting” (p. 48).

Reiff, H.B., and Gerber, P.J. (1994). Social/Emotional and Daily Living Issues for Adults with Learning Disabilities. In P.J. Gerber and H.B. Reiff (Eds.), Learning Disabilities in Adulthood. Austin, TX: Pro-Ed, pp. 72-81.

Roffman, A.L. (2000). Meeting the Challenge of Learning Disabilities in Adulthood. Baltimore, MD: Paul H. Brookes.

LD and Dysthymic Disorder

- “Reasonably assume that most individuals with learning disabilities have had a more difficult life course emotionally and are more likely to experience feelings of low self-esteem” (p. 24).

Goldstein, S. (1997). Managing Attention and Learning Disorders in Late Adolescence and Adulthood: A Guide for Practitioners. New your, NY: John Wiley and Sons.

Dyslexia and Dysthymia

- “The often unsympathetic attitude and behavior of other people undermines their confidence and contributes to the development in many dyslexics of profound and deeply ingrained low self-esteem. Negativity is more potent when significant people in the dyslexic’s life...have dismissed them as having low intelligence” (p. 49).

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). The Adult Dyslexic: Assessment, Counseling, and Training. San Diego, CA: Singular.

Major Depressive Disorder and LD

- LD adults are more at risk for suicide.
- Many LD adults have had difficulties with depression.
- “Depression may also generate low self-esteem and feelings of worthlessness as a result of negative feedback from others” (p. 49).

Cordoni, B. (1987). Living With A Learning Disability. Carbondale, IL: Southern Illinois University Press.

Smith, S.L. (1991). Succeeding Against the Odds: Strategies and Insights From The Learning Disabled. Los Angeles, CA: Jeremy Tarcher.

Roffman, A.L. (2000). Meeting the Challenge of Learning Disabilities in Adulthood. Baltimore, MD: Paul H. Brookes.

Major Depressive Disorder and Dyslexia

- Ryan wrote that dyslexics are at risk for depression. The following are characteristics of depressed dyslexics he discussed:
 - They tend to have a negative self-image.
 - They tend to view their world negatively.
 - They are hopeless about the future.

Ryan, M. (1994). The Other Sixteen Hours: The Social and Emotional Problems of Dyslexia. Baltimore, MD: Orton Dyslexia Society.

Dyslexia and Suicide

- Poor reading teens have more suicidal ideation and higher drop-out rates than good readers.
- There are higher rates of mood disorders in those with Reading Disorder than those without.
- Prevention and intervention with RD youths is needed and should focus on psychoemotional problems related to school-life.

Goldston, D., et.al. (2002). Reading Disabilities, Drop-out, and Suicidal Behavior. Poster Presentation at the 53rd Annual International Dyslexia Association Conference, Atlanta, GE., November 13-16.

LD and Anxiety

- LD college students have more problems with anxiety than do their non-disabled peers.
- Generalized Anxiety Disorder is frequently found in LD adults.
- Dyslexics tend to have significant problems with anxiety.

Hoy, C. Gregg, N., et. al. (1997). Depression and Anxiety in Two Groups of Adults with Learning Disabilities. Learning Disability Quarterly, 20, pp. 280-291.

Hooper, S.R., and Olley, J.G. (1996). Psychological Comorbidity in Adults with Learning Disabilities. In N. Gregg, C. Hoy, and A.F. Gay (Eds.), Adults with Learning Disabilities: Theoretical and Practical Perspectives. New York, NY: Guilford, pp. 162-183.

Ryan, M. (1994). The Other Sixteen Hours: The Social and Emotional Problems of Dyslexia. Baltimore, MD: Orton Dyslexia Society.)

LD and Anxiety

Roffman wrote, “Adults with LD/ADHD often experience pressure as they work with their symptoms. Anxiety develops out of such day-to-day occurrences as the loss of yet another set of keys...” (p. 49).

Roffman, A. (2000). Meeting the Challenge of Learning Disabilities in Adulthood.
Baltimore, MD: Brookes.

LD AND SOCIAL ANXIETY



LD and Social Anxiety



“The Cerebellum has only recently been implicated in the normal functioning of social behavior...new research has shown that the cerebellum is important as a mediator in cognition. To perceive an object or event, we must pull together the various sensory qualities and any relevant memories or thoughts in a carefully timed way...the cerebellum assists in delaying or accelerating these associations, and regulates attentional states...”

LD and Social Anxiety



“Coordinating associations and attention is essential to entering into a relationship with another human being. Communication, conversation, and graceful social interaction all depend on being able to pay attention to another person and to one’s own internal states and to alternate easily back and forth between them” (p.305).

Ratey, J.J. (2001). A User’s Guide to the Brain: Perception, Attention, and the Four Theaters of the Brain. New York, NY: Vintage.

LD and Social Anxiety



- 80% of dyslexics show signs of cerebellar deficits.
- “Rather than the expected cerebellar activation in these tasks, the dyslexic subjects showed greater frontal lobe activation in new learning, suggesting they were by-passing the cerebellum to some extent, and relying on conscious strategies. These important findings confirm the behavioural evidence of cerebellar dysfunction, and suggest that dyslexic subjects use different methods in sequential learning and automatic performance” (pp. 98-99).

Fawcett, A.J., and Nicolson, R. I. (2001). Dyslexia: The Role of The Cerebellum. In A. Fawcett (Ed.), Dyslexia: Theory and Good Practice. Philadelphia, PA: Whurr, pp. 89-106.

LD and Social Anxiety



Fawcett asked, “Why aren’t dyslexics just useless?” To which she responded, “dyslexics are able to learn, but their impaired cerebellar function makes learning more labored than it does for non-dyslexics.”

Fawcett, A. (March 11, 1998). Cerebellar Dysfunction in Dyslexia. Paper presented at the 35th Learning Disabilities Association Conference Pre-Conference Symposium, Washington, DC.

Dyslexia and Procedural Training

- The ***Square Root Rule:***

“The extra time needed for a dyslexic child to master a task is proportional to the square root of the time a non-dyslexic child takes” (Slide 45).

Fawcett, A. (November 5, 2004). Dyslexia and Learning. Paper presented at the 55th International Dyslexia Conference, Philadelphia, PA, from handout of slides, Number 45.

LD and Social Anxiety



“No one understood what was wrong or why my life was such a struggle...Sometimes I wonder. It’s been a huge mental drain on me and still takes an awful lot of cognitive energy to maintain my movements”— Ian Waterman, a man who lost his “sixth sense” (proprioception).

Azar, B. (June, 1998). Why Can’t This Man Feel Whether or Not He’s Standing Up?
Monitor of the American Psychological Association, 29 (6), pp. 11 and 20.

LD and Social Anxiety



“One final ongoing issue that is worthy of mention for many with LD/ADHD is the problem of fatigue. The extra effort to cope with the continued social and academic demands of schooling can be chronically exhausting” (p. 217).

Roffman, A. (2000). Meeting the Challenge of Learning Disabilities in Adulthood.
Baltimore, MD: Brookes.

LD Life Insight



“The process of continually compensating can be deeply tiring. Betty notes that she often is exhausted as a direct result of the enormous effort that she expends on building on her strengths and working around her weaknesses. She notes, ‘You’re always compensating and you’re tired a lot’ (p. 261).

Roffman, A. (2000). **Meeting the Challenge of Learning Disabilities in Adulthood**. Baltimore, MD: Brookes.

Observation of an Autistic Genius:

- Temple Grandin said for those with autism spectrum disorders social adaptation must occur on a conscious level.
- I believe the same is true for many with Dyslexia, AD/HD, NVLD, etc.

Grandin, T. (1995). Thinking in Pictures and Other Reports from my Life with Autism. New York, NY: Vintage.



LD and Social Anxiety



“We boldly proposed the ‘dyslexic automatization deficit’ hypothesis...dyslexic children have abnormal differences in making skills automatic, despite extensive practice, regardless of whether the skills are cognitive or motor...although they appear to be behaving normally, they show unusual lapses of concentration and get tired more quickly than normals when performing a skill...”

LD and Social Anxiety



“...(dyslexic-sic) children are able to perform at apparently normal levels most of the time by ‘consciously compensating’ , that is consciously concentrating (controlled processing) on performance that might normally be automatic processing” (pp. 146-147).

Nicolson, R.I., and Fawcett, A. (2001). Dyslexia as a Learning Disability. In A Fawcett (Ed.), Dyslexia: Theory & Good Practice. Philadelphia, PA: Whurr, pp. 141-159.

Anxiety and Learning Disorders//AD/HD

Roffman wrote, “Adults with LD/ADHD often experience pressure as they work to cope with their symptoms. Anxiety develops out of such day-to-day occurrences as the loss of yet another set of keys...” (p. 49).

Roffman, A.J. (2000). Meeting The Challenge of Learning Disabilities In Adulthood. Baltimore, MD: Brookes.

Summary Statement



Kevin T. Blake, Ph.D., P.L.C.'s Observation

- “If you have a neurosocial deficit (i.e., in the brain hardware for social interaction) you are forced to create software to compensate for it. That’s hard and takes time and energy. It also takes an action which is for most people unconscious and makes it conscious, hence it will never be as “automatic and efficient” as an ability...”

Kevin T. Blake, Ph.D., P.L.C.'s Observation (Continued)

- “...Such compensation skills divide attention and make tasks which are by their nature not conscious more onerous and less efficient creating frustration. When additional stimuli is added on an unpredictable basis this requires a cognitive shift and these learned skills tend to break down which may lead to a feeling of vulnerability and anxiety...”

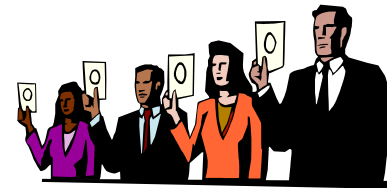
Kevin T. Blake, Ph.D., P.L.C.'s Observation (Continued)

- “...People with such disabilities tend to fatigue faster in social situations and perform cognitively less efficiently when engaged in their social “skills” compensations.
- Those with neurosocial deficits are at risk of not being aware of and/or sensitive to cultural norms and symbols as well as their importance in social interaction. This unawareness may cause significant social rejection, anxiety and frustration for these individuals...”

Kevin T. Blake, Ph.D. P.L.C.'s Observation (Continued)

- An additional source of frustration and anxiety for individuals with these deficits is most peoples' social interactions are automatic and thus they frequently do not understand the struggles of those who must socialize on a cognitive level.

LD and Social Anxiety



- LD adults may not have the amount of social experience that their non-disabled peers have.
- “I have no stories to tell.”

Jordan, D.R. (1984). Personal Communication.

Jordan, D.R. (2002). Overcoming Dyslexia in Children, Adolescents, and Adults. Austin, TX: Pro-Ed.

LD and Obsessive Compulsive Disorder

- LD adults may be at risk for OCD
- One study indicated approximately 23% of LD children have OCD.

Spreen, O. (1988). Learning Disabled Children Grown Up: A Follow-Up Into Adulthood. New York, NY: Oxford Press.

Swedo, S.E., et. al. (1989). Obsessive Compulsive Disorder in Children and Adolescents. Archives of General Psychiatry, 46, 335-341.



LD and Borderline Personality Disorder

- Those with LD and/or AD/HD are more at risk for Borderline Personality Disorder.
- Some with Borderline Personality Disorder have EEGs that indicate abnormal temporal lobe activity.

Kreisman, J.J., and Strauss, H. (1989). I hate you-Don't Leave Me: Understanding the Borderline Personality. New York, NY: Avon.



LD and Borderline Personality Disorder

Dyslexics have a lower seizure threshold than those without LD.

Duane, D. D. (1993). Developmental Disorders of Learning, Attention and Affect.

Videotape prepared by the Institute for Behavioral Neurology, 10210 North 92nd Street, Suite 300, Scottsdale, AZ 85258.



LD and Borderline Personality Disorder

- The comorbidity rate of LD with Borderline Personality Disorder reported in the literature is from 20% to 100%.
- Research at the Menninger Clinic indicated it was 39%.

Berg, M. (1992). Learning Disabilities in Children with Borderline Personality Disorder. Bulletin of the Menninger Clinic, 56 (3), 379-392.



LD and Borderline Personality Disorder



- 81% of those with BPD have a history of brain injury vs. 22% controls.
- 44% of those with BPD had developmental anomalies and 58% had developmental and brain injury.
- 7 of 9 borderlines had evidence of frontal lobe problems in a pilot study.

Victor, B.S. (October 14-17, 1999). Treatment of Impulsivity and Aggression in Patients with Personality Disorders. Paper presented at the Better Recognition and Treatment of Personality Disorders, Bipolar Disorder and Social Phobia Conference, CME, Inc., Scottsdale, AZ.

LD and Borderline Personality Disorder



- Borderlines have increased left side soft neurological signs.
- Those with aggressive tendencies have right side soft signs.
- They also show soft signs of frontal lobe on Wisconsin Card Sort.
- Antidepressants with anticonvulsants can help these individuals.

Victor, B.S. (October 14-17, 1999). Treatment of Impulsivity and Aggression in Patients with Personality Disorders. Paper presented at the Better Recognition and Treatment of Personality Disorders, Bipolar Disorder and Social Phobia Conference, CME, Inc., Scottsdale, AZ.

LD and Borderline Personality Disorder



- By far the largest group of LD persons are Dyslexics.
- Dyslexics have a lower seizure threshold.
- A major area of neurological anomalies is the temporal lobe.
- Often those with temporal lobe seizures have similar symptoms to those with Borderline Personality Disorder.
- BPD in dyslexics may be temporal lobe seizures.

Berg, M. (1995). Personal Communication.

LD and Borderline Personality Disorder

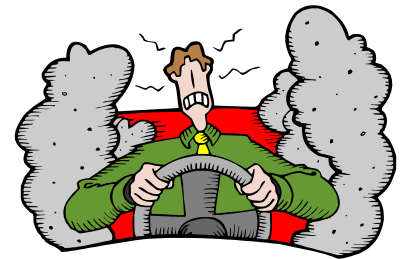


- “The poorly defined sense of self, unstable interpersonal relationships, and sensitivity to rejection that are typical of borderline personality disorder may also be the direct result of learning disabilities” (p. 134).

Wren, C. and Einhorn, J. (2000). Hanging by a Twig: Understanding and Counseling Adults with Learning Disabilities and ADD. New York, NY: W.W. Norton.

LD and Antisocial Personality Disorder

- 17% of LD adolescents meet criteria for Conduct Disorder.
- LD teens are twice as likely to be delinquent-35% of teens in prison are LD.



Porter, J.E., and Rourke, B.P. (1985). Socioemotional Functioning of Learning Disabled Children: A Subtype Analysis of Personality Patterns. In B.P. Rourke (Ed.), Neuropsychology of Learning Disabilities: Essentials of Subtype Analysis. New York, NY: Guilford.

Lewkowicz (1996). Helping Children Through Juvenile Court: The Youngster with Learning Disabilities. LDA Newsbriefs, 31 (1), pp. 23 and 28.

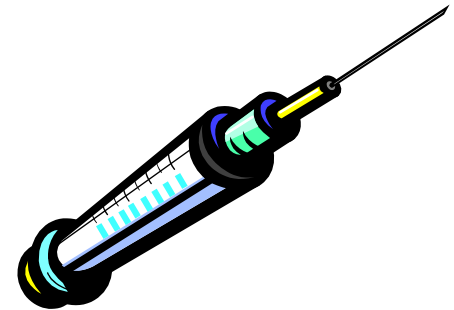
LD and Antisocial Personality Disorder



- About 3 out of 4 males in prison show dyslexic symptoms.
- Average reading level of prisoners = 4th grade

Jordan, D.R. (2002). Overcoming Dyslexia In Children, Adolescents, and Adults (Third Edition). Austin, TX: Pro-Ed.

LD and Substance Abuse



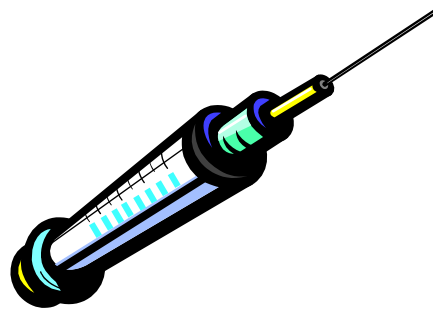
- Several of the adults with LD/ADHD whom Roffman interviewed spoke of past struggles with substance abuse (p. 51).
- Up to 60% of those with LD are in treatment for substance abuse.

Roffman, A.L. (2000). Meeting the Challenge of Learning Disabilities in Adulthood. Baltimore, MD: Paul H. Brookes.

Ellis, W., and Cramer, C. (1996). Introduction. W. Ellis, and C. Cramer (Eds.), Learning Disabilities: Lifelong Issues. Baltimore, MD: Brookes, pp. XXVII-XXXI.

Esposito, J.T. (1998). Parents Don't Care— Or Do They? LDA Newsbriefs, 31 (1), pp. 20-21.

LD and Substance Abuse



- LD may underlie Substance Abuse Disorders.

Wren, C. and Einhorn, J. (2000). Hanging by a Twig: Understanding and Counseling Adults with Learning Disabilities and ADD. New York, NY: W.W. Norton.

IMPULSIVITY?



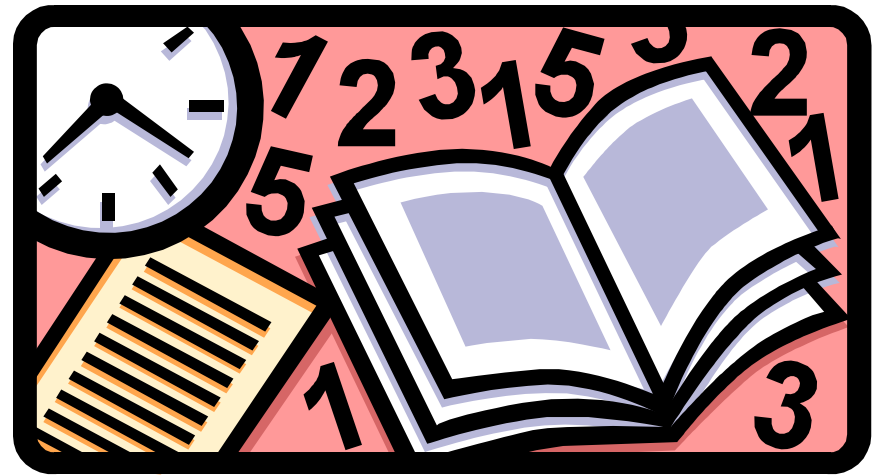
AD/HD and Learning Disorders

- Barkley stated 35% to 50% of adults with AD/HD have Learning Disorders.
- Hynd reported that 60% of those with Inattentive AD/HD have Learning Disorders.
- AD/HD is not a Learning Disorder. It is an “Attention-Deficit and Disruptive Behavior Disorder” (DSM-IV, TR, p. 85).

Barkley, R.A. (1996). ADHD in Children, Adolescents, and Adults: Diagnosis, Assessment, and Treatment. Cape Cod Symposia, August, Pittsfield, MA.

Hynd, G. (2002). ADHD and Its Association with Dyslexia: Diagnostic and Treatment Challenges. Paper presented at the 53rd Annual International Dyslexia Association Conference, Atlanta, GE, November 16.

AD/HD and Learning Disorders



Barkley stated:

15% to 30% of those with AD/HD have Reading Disorder;

- 26% have Spelling Problems;
- 10% to 60% have Mathematics Disorder; and
- 60% have Developmental Coordination Disorder-Dysgraphia.

Barkley, R.A. (2002). ADHD and Oppositional Defiant Children. Seminar Presented February 19-20, Phoenix, AZ, The Institute for Continuing Education, Fairhope, AL, from handout, pp. 9.

Barkley, R.A. (2002) Mental and Medical Outcomes of AD/HD. Pre-Conference Institute, # TPA1, Thursday October 17, 2002, 14th Annual CHADD International Conference, Miami Beach, FL.

AD/HD and Learning Disorders

Hynd indicated among those with Inattentive AD/HD:

- 21% have Reading Disorder;
- 33% have Mathematics Disorder; and
- 4% have Spelling/Disorder of Written Expression.

Hynd, G. (2002). ADHD and Its Association with Dyslexia: Diagnostic and Treatment Challenges. Paper presented at the 53rd Annual International Dyslexia Association Conference, Atlanta, GE, November 16.



AD/HD and Learning Disorders



Surprise! There are more people with Learning Disorders than AD/HD!

- Barkley estimated 4.7% of adult population has AD/HD (all types).
- Lyon and the NICHD have found that 15% to 20% of the general population meets criteria for Reading Disorder-Dyslexia Alone!

Barkley, R.A. (2002). ADHD and Oppositional Defiant Children. Seminar Presented February 19-20, Phoenix, AZ, The Institute for Continuing Education, Fairhope, AL, from handout, pp. 8.

Lyon, G.R. (1996). The State of Research. In S.C. Cramer, and W. Ellis (Eds.), Learning Disabilities: Lifelong Issues, Baltimore, MD: Paul Brookes, pp. 3-64.

Learning Disorders and AD/HD



- Conservatively 25% of those with LD have AD/HD
- Some estimate that between 30% to 70% of those with LD will have significant AD/HD symptoms as they enter adulthood.

Nosek, N. (1997). Dyslexia In Adults: Taking Charge of Your Life. Dallas, TX: Taylor.

Hooper, S.R., and Olley, J.G. (1996). Psychological Comorbidity in Adults with Learning Disabilities. In N. Gregg, C. Hoy, and A.F. Gay (Eds.), Adults with Learning Disabilities: Theoretical and Practical Perspectives. New York, NY: Guilford, pp. 162-183.

PSYCHOTHERAPY AND LD



Focus of Treatment for LD and AD/HD

- Prolonged Grief
- Interpersonal Role Disputes
- Role Transitions
- Developing Necessary Interpersonal Skills
- Family Issues



Goldstein, S. (1998). Emotional Problems In Adults with Learning Disabilities.: An Often Unseen but Not Insignificant Problem. LDA Newsbriefs, 33 (4), p. 24.

LD Life Insight

“The school system never felt compelled to educate me on how having a LD would impact my life”-Garrett Day

McGrady, H., Lerner, J., and Boscardin, M.L. (2001).
The Educational Lives of Students with
Learning Disabilities. In P. Rodis, A. Garrod,
and M.L., Boscardin (Eds.), Learning
Disabilities & Life Stories. Boston, MA: Allyn
and Bacon, p. 185.



Psychotherapy and LD

Why most LD adults seek therapy

- Stress and anxiety coping with life issues affected by the disability
- Low self-esteem
- Unresolved grief
- Sense of helplessness

Barton, R.S., and Fuhrmann, B.S. (1994). Counseling and Psychotherapy for Adults with Learning Disabilities. In P.J. Gerber, and H.B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-Ed, pp. 82-96.

Psychotherapy for LD

Growth for LD Clients Relies On:

- a strong therapeutic relationship and bond;
- the therapist helping the client to understand their disability as well as his/her cognitive processing style(strengths and weaknesses); and
- interventions that fit the social, emotional and cognitive needs of the client.

Barton, R.S., and Fuhrmann, B.S. (1994). Counseling and Psychotherapy for Adults with Learning Disabilities. In P.J. Gerber, and H.B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-Ed, pp. 82-96.

Psychotherapy and LD

Secondary features of Dyslexia

- Problems remembering facts, figures, sequences, names, and with working memory
- Problems with organization
- Problems with following conversation

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). The Adult Dyslexic: Assessment Counseling and Training. San Diego, CA: Singular.

Psychotherapy and LD

- Those with learning disabilities may have more difficulty with everyday adult living than they did when they were in school.
- They may not be able to make a good living, have a social life, run a family, etc.

Wren, C., and Einhorn, J. (2000). Hanging by a Twig: Understanding and Counseling Adults with Learning Disabilities and ADD. New York, NY: Norton.

Psychotherapy and LD

Potential Social Interaction Problems of Dyslexics

1. Facial Perception and Recognition
2. Difficulties with making and interpreting gestures, body language, inflection and tone of voice
3. Difficulty making central inferences in social situations regarding mood and attitude
4. Problems with determining correct response

Wren, C., and Einhorn, J. (2000). Hanging by a Twig: Understanding and Counseling Adults with Learning Disabilities and ADD. New York, NY: Norton.

Psychotherapy and LD

“Many adults with dyslexic difficulties develop coping and compensatory strategies and usually can become quite adept at disguising the presence of dyslexia. Due to this many remain unfulfilled, often underestimating their abilities, perhaps working in an occupation that does not use their real abilities or even declining promotion for fear that their dyslexic difficulties are exposed” (p. 292).

Kirk, J., McLoughlin, D., and Reid, G. (2001). Identification, and Intervention in Adults. In A. Fawcett (Ed.), Dyslexia: Theory and Good Practice. Philadelphia, PA: Whurr, pp. 292-308.

Psychotherapy and LD

“As psychotherapists working with persons with learning disabilities, we are presented with the results of the damage due to misunderstanding and mistreatment, and we have to help our clients heal from that damage. Helping our clients to understand what their learning disabilities are, how they have been affected by them, how their strengths and...

Psychotherapy and LD

...weaknesses have helped or hindered them in school, and how they help or hinder them in life beyond school—these tasks are at the heart of psychotherapy with persons with learning disabilities” (p. 187).

Einhorn, J. (2000). Psychotherapy of Two Invisible Sources of Distress: A Framework for Therapy. In Wren (Ed.), Hanging by a Thread: Understanding and Counseling Adults with Learning Disabilities and ADD. New York, NY: Norton, pp. 174-187.

Psychotherapy and LD

Some LD People:

- are not aware of their disability and do not know how to compensate for it;
- are aware of their disability and do not know how to compensate for it;
- are aware of their disability and unconsciously compensate for it;
- are aware of their disability and consciously develop compensation strategies.

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). The Adult Dyslexic: Assessment Counseling and Training. San Diego, CA: Singular.

Psychotherapy and LD

- Often the Dyslexics biggest fear is being “found out”– That others will learn they cannot read...
- They fear change because they fear they will not be able to compensate...
- They are frustrated with their literacy difficulties and social problems...

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). The Adult Dyslexic: Assessment Counseling and Training. San Diego,CA: Singular.

Psychotherapy and LD

“It has been well documented in the childhood literature that psychotherapy for symptoms of ADHD and LD is ineffective in changing the core problems of these disorders. However, clinicians are also well aware that the comorbid, or accompanying, problems that the adult ADHD and LD populations experience are similar to the problems other adults experience and will likely respond to general therapeutic approaches”.

Goldstein, S. (1997). Psychosocial Treatments. In S. Goldstein (Ed.), Managing Attention and Learning Disorders in Late Adolescence & Adulthood: A Guide for Practitioners. New York, NY: John Wiley and Sons, pp. 236-265.

Psychotherapy and LD

“Further, while there may be some benefit to short-term information-focused counseling when an adult is initially diagnosed with ADHD or LD, there is no data to suggest that long-term counseling concentrating on the symptoms of these disorders is particularly helpful” (p. 264).

Goldstein, S. (1997). Psychosocial Treatments. In S. Goldstein (Ed.), Managing Attention and Learning Disorders in Late Adolescence & Adulthood: A Guide for Practitioners. New York, NY: John Wiley and Sons, pp. 236-265.

THERAPEUTIC RULES OF THUMB



Therapeutic Rules of Thumb



- **NEVER** give bibliotherapy, even with “high functioning” dyslexics. A “little book” that may take you 2 hours to read may take them 20 and they may have low comprehension.
- Time is the LD adult’s most valuable commodity.
- Leisure or fun reading are oxymorons for dyslexics.
- Remember most mental health professionals are “eulexics”. Dyslexics by definition are not!
- Options-Books on Tape for the Blind and Dyslexic, videos, read to your client, etc.

Therapeutic Rules of Thumb



- **NEVER** have your dyslexic client journal. You have asked them to take a massive spelling and written expression test that is horridly time consuming. Many dyslexics have comorbid Developmental Coordination Disorder-Dysgraphia and/or Disorder of Written Expression.
- Options— do an audio taped journal, allow word processing, allow them to dictate to another person, voice activated word processors
- (Note: Computers don't work for everyone!)

Therapeutic Suggestions

- Help client complete intake forms, insurance forms, checks, etc.
- Give them information about support groups and helpful organizations.



Therapeutic Issues



- Don't brush over their, "...little reading problem".
- Their disabilities have been discounted for years by significant people in their lives.
- Don't say things like, "Oh, I don't like to read either. I must be dyslexic too".
- Ask if they have diagnostic evaluations of their disabilities. Ask for authorization to get copies of reports and speak to evaluators. Follow through with this if you ask for these.

Therapeutic History Questions



- Do you read the news paper?
- If not how do you get your news?
- How do you spell words correctly on checks?
- How do you keep your checkbook? Who keeps your check book?
- Do you eat in ethnic restaurants?
- Do you vote?
- What do you say when someone asks you, “what do you like to read?”

Therapeutic History Questions



- When someone asks you such a question how do you feel?
- How do you feel when someone gives you a book as a gift.
- What do you say when they ask you later about what happened in the book?
- Are you afraid of making mistakes when completing “official forms” (i.e. job applications, IRS forms, etc.)?

Therapeutic History Questions



- Does it take you longer to get familiar with changes at work.
- Have you not taken a job promotion because you fear you could not do it?
- Can you read a map?
- Do you get lost often?
- If so, how do you get found?
- What do you do when you are asked to read aloud?

Therapeutic History Questions



- Who reads to you?
- Do you avoid traveling because of your reading concerns?
- How do you know it is safe to tell others of your reading problems?
- How do you know it is safe to tell an employer about your reading problem?
- How do you feel when someone corrects your spelling?

Therapeutic History Questions



- What do you do when your child asks you to read to him/her and how do you feel?
- Are you afraid your child has learning difficulties?
- How does your reading problem cause family and relationship problems for you?
- Are you afraid you might develop other conditions (i.e., dementia, etc.) as you age as the result of your learning difference?

Therapeutic History Questions



- How are you manifesting your learning difficulties in this therapy session?
- How will you understand and remember what goes on in therapy?
- Tell me the name of your disability, how you manifest it and what kinds of academic and work accommodations you need.
- How do you cover your dyslexia?

Therapeutic History Questions



- How do you compensate?
- What technology do you use to compensate?
- Do you want to learn more about your disability and hoe to make life with it easier?
- Do you have difficulty expressing yourself emotionally?
- Do you have problems recalling names?
- Can you ride a bike, dance? How were/are you at sports?
- Does it take you longer to learn than your peers?

Therapeutic History Questions



- Do you have problems following conversations?
- Do you have problems understanding facial expressions, body language, and/or gestures?
- Do you have problems dating, flirting, maintaining relationships, marriage, etc.
- Do you have problems parenting?
- Other questions?

TRANSITION PLANNING FOR DYSLEXICS



TRANSITION PLANNING FOR DYSLEXICS

- Transition Planning should begin as soon as the student is identified
- Academic skills should be remediated to the highest level
- Basic life skills should be taught from elementary school on-Basic life skills=work skills
- Social skills training should be geared to workplace starting in high school
- Students need to know what their disability is, what their strengths and weakness are, what they need for accommodations and their rights-Starting at identification

TRANSITION PLANNING FOR DYSLEXICS

- “High school vocational educational experiences, work-study jobs, and paid work experiences were related to successful employment and should be considered best practices for a transition program. Student who were given tutorial assistance and other support services were more likely to graduate, thereby increasing their likelihood of successful adult outcomes. A school advocate, usually a special educator, seemed to be another component of a successful transition program” (p. 281).

Minskoff, E.H. (1996). Improving Employment Outcomes for Persons with Learning Disabilities. In N. Gregg, C. Hoy and A.F. Gay (Eds), Adults with Learning Disabilities: Theoretical and practical Perspectives. New York, NY: Guilford.

TRANSITION PLANNING FOR DYSLEXICS

- Do not shield student from failure-Not “real world”
- Career information from elementary school on
- Students should be part of the IEP process from day one
- Vocational training is a must!
- Transition plans must include training in how to be technologically literate

TRANSITION PLANNING FOR DYSLEXICS

- School-to Work Opportunities Act of 1994

EMPLOYMENT AND LEARNING DISABILITIES



Employment and Learning Disabilities



Brown and Gerber (1994) wrote there were 3 types of LD people in the world of work:

- those whose LD does not interfere with work;
- those who struggle long hours to overcome their LD in the workplace; and
- those with LD who are chronically unemployed.

Brown, D.S, and Gerber, P.J. (1994). Employing People with Learning Disabilities. In P.J. Gerber and H. B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-Ed, pp. 194-203.

Employment and Learning Disabilities



- Don't rule out certain career paths solely due to being LD.
- Don't let them rule out more education just because of bad past experiences in school.
 - If they fall under this category help improve their academic confidence and self-esteem.

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). The Adult Dyslexic: Assessment Counseling and Training. San Diego,CA: Singular.

Employment and Learning Disabilities



- “Even residual difficulties, such as slow reading and writing, would make some occupations onerous” (p. 84).
- “Eventually, dyslexics should pursue occupations and careers for which they are appropriately equipped in terms of their abilities, aptitudes and interests” (p. 84).

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). The Adult Dyslexic: Assessment Counseling and Training. San Diego, CA: Singular.

LD Life Insight

“...a person with learning disabilities must work harder than a nondisabled peer to accomplish the same learning” (p. 185).

McGrady, H., Lerner, J., and Boscardin, M.L. (2001). The Educational Lives of Students with Learning Disabilities. In P. Rodis, A. Garrod, and M.L., Boscardin (Eds.), Learning Disabilities & Life Stories. Boston, MA: Allyn and Bacon, p. 185.



Employment and Learning Disabilities



Thus, adults with learning disabilities should not be limited in the job/career choices if they have adequate abilities, aptitudes and interest, and their compensation strategies and accommodations work in that environment.

Social Disorders



- “...social skills deficits can be the most debilitating part of the learning-disabled experience” (p. 201).
- “Failure at ‘office politics’ can lead to being fired. Many people with learning disabilities, at high or low levels, reach a plateau and are unable to advance for reasons of personal matching” (p. 201).
- Poor social skills are the reason for under-employment in many with LD.

Brown, D.S, and Gerber, P.J. (1994). Employing People with Learning Disabilities. In P.J. Gerber and H. B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-Ed, pp. 194-203.)

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). The Adult Dyslexic: Assessment Counseling and Training. San Diego,CA: Singular.)

Employment and Learning Disabilities

What can be done about this?



- **Have a job coach/career counselor help them prepare for the interview.**
- **A job coach can advocate for the person and advocate for accommodations.**
- **Very intense job related social skills training by a mental health professional which includes microskills training in groups and videotape feedback.**
- **Periodic onsite assessment of social skills, monitor progress and fill in social gaps.**

Inge, K.J., and Tilson, G. (1994). Supported Employment: Issues and Applications for Individuals with Learning Disabilities. In P.J. Gerber and H.B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-ED, pp. 179-193.)

Employment and Learning Disabilities



“...behavioral assessment in a real work environment is the best predictor of an individual’s performance for a supported employment placement” (p. 182).

Inge, K.J., and Tilson, G. (1994). Supported Employment: Issues and Applications for Individuals with Learning Disabilities. In P.J. Gerber and H.B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-ED, pp. 179-193.

Employment and Learning Disabilities



- 41% of LD adults have problems completing a job application.
- Job placement tests cause problems, too.
- Applying for accommodations can bypass these.

Brown, D.S, and Gerber, P.J. (1994). Employing People with Learning Disabilities. In P.J. Gerber and H. B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-Ed, pp. 194-203.

Employment and Learning Disabilities



Those who are over 40 years of age have the most problems because:

- they were typically diagnosed late in life;
- often they have no accommodations and do not know about them.

Roffman, A. (February 14, 2003). Working with LD: The Impact of Learning Disabilities on the Job. Paper presented at the 40th Annual Learning Disabilities Association International Conference, Chicago, IL, session T58.

Employment and Learning Disabilities



Price offered the following false beliefs employers have about the learning disabled:

- certain jobs are suited to the disabled;
- it's good to hire one disabled person to see what he/she can do;
- the disabled are better workers than non-disabled;
- special training is needed to work with the disabled;
- accommodations are expensive;

Employment and Learning Disabilities



- disabled people cannot work;
- if we hire the disabled our health insurance rates will rise; and
- we must place the disabled in jobs where they will succeed.

Price, L. (1997). Psychosocial Issues of Workplace Adjustment. In P.J.Gerber and D.S. Brown (Eds.), Learning Disabilities and Employment. Austin, TX: Pro-ED, pp. 275-306.

Employment and Learning Disabilities



- 3% to 14% of the workforce is LD.
- Often employers feel more comfortable hiring those with physical disabilities than those with LD.
- “...difficulties with literacy do not necessarily mean lack of intelligence or education” (p. 79).

Payne, L. (1997). Job Accommodations: What Works and Why. In P.J. Gerber and D.S. Brown (Eds.), Learning Disabilities and Employment. Austin, TX: Pro-Ed, pp. 275-306.

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). The Adult Dyslexic: Assessment Counseling and Training. San Diego, CA: Singular.

Employment and Learning Disabilities



- “Adult dyslexics are frequently reluctant to admit their illiteracy because of its association with stupidity” (p. 73).
- Dyslexics often learn to compensate in their job until their job changes (i.e., promotion, etc.).

McLoughlin, D., Fitzgibbon, G., and Young, V. (1994). The Adult Dyslexic: Assessment Counseling and Training. San Diego,CA: Singular.

Employment and Learning Disabilities



“If you do not need accommodations in the application process, generally it is best to wait until after you have the job. If you see that part of the job is a problem for you and believe you need an accommodation, it is best to act promptly and not allow a long period of poor performance. Also, at the time you disclose your disability, request specific reasonable accommodations that will enable you to do your job” (p. 4).

Latham, P.H. (1998). Learning Disabilities and the Law—After High School: An Overview for Students. LDA Newsbriefs, 33 (4), pp. 3-4.

Employment and Learning Disabilities



LD employees should start the disclosure process with someone from the human resources/personnel department. Such a specialist could assist with accommodations and coming up with a plan of action. A pre-disclosure session may be a good idea with a job coach, LD specialists, etc.

Payne, L. (1997). Job Accommodations: What Works and Why. In P.J. Gerber and D.S. Brown (Eds.), Learning Disabilities and Employment. Austin, TX: Pro-Ed, pp. 275-306.

Employment and Learning Disabilities



“Job accommodations refers to the process of matching the communications style and expectations of the supervisor and the production system to ensure that the disability of the employee does not hamper his or her ability to produce quality products or services” (p. 198).

Brown, D.S, and Gerber, P.J. (1994). Employing People with Learning Disabilities. In P.J. Gerber and H. B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-Ed, pp. 194-203.

Employment and Learning Disabilities

Gregg, Johnson, and McKinley provided the following guidelines to determine if an accommodation would cause an employer undue hardship:

- 1. The nature and net cost of the accommodation.**
- 2. The financial resources of the facility making the accommodation.**
- 3. The type of facility, and the impact operations if an accommodation would be provided to a consumer” (p. 354).**

Gregg, N., Johnson, Y., and McKinley (1996). Learning Disabilities Policy and Legal Issues: A Consumer and Practitioner User-Friendly Guide. In N. Gregg, C. Hoy, and A.F. Gay(eds.), Adults with Learning Disabilities: Theoretical and Practical Perspectives. New York, NY: Guilford, pp. 329-367.



Employment and Learning Disabilities



Brown and Gerber (1994) suggested using the Ernst and Young Quality Consulting Group (1990) model in working to develop a specific work accommodation for an LD/ADHD employee:

Employment and Learning Disabilities



- “1. Plan. The supervisor, the employee and other team members find a way to resolve the situation...
2. Do. After sufficient planning, the accommodation should be implemented...
3. Check. See if the accommodation works...
4. Act. If the accommodation does not work, it may be necessary to go through the cycle a second time. If the accommodation works, steps should be taken to institutionalize the accommodation so the employee does not lose it with a change of supervisor or other company need” (p. 198).

Brown, D.S, and Gerber, P.J. (1994). Employing People with Learning Disabilities. In P.J. Gerber and H.B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-Ed, pp. 194-203.

LD Life Insight



Tessler (1998), a dyslexic psychologist wrote, “Today, people regard me as successful and assume I can do things I can’t do” (p. 32). “With or without a learning disability I must perform as well as my colleagues” (p. 33).

Tessler, L.G. (1998). Accommodations Mack Success Possible: A Personal Account. Perspectives, 24 (3), pp. 32-33.)

Employment and Learning Disabilities



Tessler wrote of “psychological accommodations” that individuals with learning disabilities can self-apply to the work environment. They are:

1. Slow down—give yourself permission to take the time you need.
2. Create obtainable goals.
3. Break down each task into small, manageable steps.

Employment and Learning Disabilities



4. Be willing to work very hard.
5. Recognize and accept the fact that only extra effort will get you the success that others achieve with much less work.
6. Don't quit especially when the going gets tough. Take a break instead.
7. Establish a timetable that is realistic and leave as much room for error and re-doing as possible.

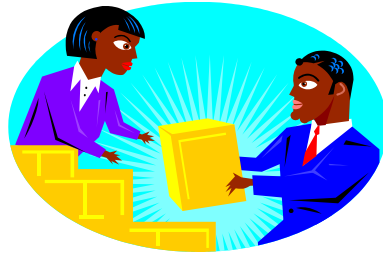
Employment and Learning Disabilities



8. Anticipate and prepare for problems.
9. Take a chance. Do something you're not sure you can do well. It's the only way to grow and find your full potential" (p. 33).

Tessler, L.G. (1998). Accommodations Make Success Possible: A Personal Account. Perspectives, 24 (3), pp. 32-33.

Employment and Learning Disabilities



“The findings suggest that the overriding factor leading to success is control. Successful adults with learning disabilities were able to control their lives, and the greater degree of control, the greater likelihood of success...Control refers to the drive to manage one’s life” (p. 207).

Ginsberg, R., Gerber, P.J., and Reiff, H.B. (1994). Employment Success for Adults with Learning Disabilities. In P.J. Gerber and H.B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-ED, pp. 204-213.

Employment and Learning Disabilities

Successful LD Adults:

- have a strong desire to achieve;
- are goal driven;
- reframe disabilities into abilities;
- **are extremely persistent;**
- find jobs that are good matches for abilities, skills and interests; and
- are creative and not afraid to ask for help.



Ginsberg, R., Gerber, P.J., and Reiff, H.B. (1994). Employment Success for Adults with Learning Disabilities. In P.J. Gerber and H.B. Reiff (Eds.), Learning Disabilities in Adulthood: Persisting Problems and Evolving Issues. Austin, TX: Pro-ED, pp. 204-213.

Employment and Learning Disabilities

Job Accommodations Network

P. O. Box 6080

Morgantown, WV 26506-6080

Voice/TTY (in US): 1-800-526-7234

Voice/TTY (Worldwide): 1-304-293-7186

Fax: 1-304-293-5407

E-mail: jan@jan.icdi.wvu.edu

Web: www.jan.wvu.edu/english/



Employment and Learning Disabilities

Often LD adults do not know how to:

- prepare for a job interview;
- act during a job interview;
- advocate for themselves on the job;
- behave appropriately on the job; or
- behave with the opposite sex on the job.



Crawford, R. (1997). Vocational Programs and Practices. In S. Goldstein (Ed.), Managing Attention and Learning Disorders in Late Adolescence and Adulthood: A guide for Practitioners. New York, NY: John Wiley and Sons, pp. 287-314.

Employment and Learning Disabilities



Eight Myths About Careers:

- I need to choose exactly the right job.**
- I am making a decision for a lifetime.**
- Most people have made the decision by my age.**
- I want the test to tell me what to do.**
- If I like to do something I should be good at it..**
- I need to get this done ASAP.**
- If I don't succeed I failed.**
- I'll take some time off then I'll know what to do.**

Crawford, R. (1997). Vocational Programs and Practices. In S. Goldstein (Ed.), Managing Attention and Learning Disorders in Late Adolescence and Adulthood: A guide for Practitioners. New York, NY: John Wiley and Sons, pp. 287-314.

Employment and Learning Disabilities



A good Resource for Career and Learning Disabilities:

Crawford, R. (1997). Vocational Programs and Practices. In S. Goldstein (Ed.), Managing Attention and Learning Disorders in Late Adolescence and Adulthood: A guide for Practitioners. New York, NY: John Wiley and Sons, pp. 287-314.

Employment and Learning Disabilities



Before a person with a disability seeks employment they should check with the Equal Employment Opportunity Commission (EEOC) to see if they have any ADA complaints against the potential employer.

Phone: 1-800-669-4000

TTY: 1-800-669-6820

Website: www.eeoc.gov

Roffman, A. (February 14, 2003). Working with LD: The Impact of Learning Disabilities on the Job. Paper presented at the 40th Annual Learning Disabilities Association International Conference, Chicago, IL, session T58.

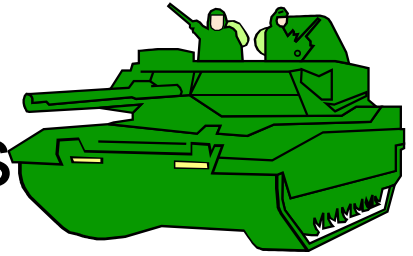


Employment and Learning Disabilities

The President's Committee Job Accommodations Network will become The Office of Disability Policy, Department of Labor in 2004.

- Web: www.disability.gov/CSS/Defaults.asp
- Web: www.DisabilityInfo.gov
- Voice: 1-800-526-7234

Employment and Learning Disabilities



“Many individuals with learning disabilities or ADD join the Armed forces and report that the structure and clear expectations help them to do well. However, these conditions may prevent some individuals from obtaining the required score on the Armed Forces Qualifying Test. The Armed Forces are not required to grant accommodations Further, military regulations provide that academic skills deficits that interfere with school or work after the age of 12 may be a cause for rejection for service in the Armed Forces” (p. 4).

Latham, P.H. (1998). Learning Disabilities and the Law—After High School: An Overview for Students. LDA Newsbriefs, 33 (4), pp. 3-4.

ACCOMMODATIONS FOR DYSLEXICS



Accommodations for Dyslexics



The ADA of 1990 and Section 504 of the Rehabilitation Act of 1973 require all educational institutions provide academic adjustments and auxiliary aids to self-identified disabled students to insure equal access.

Jenison, M.E., Westra, M., Russell, J.H. (In Press). Do “Unreasonable” Accommodations for Postsecondary Students Provide Unfair Advantages.

Accommodations for Dyslexics



“All of the studies suggested that while students with identified learning disabilities significantly benefited by the provision of extended time, students without disabilities made less dramatic gains” (p. 7).

Jenison, M.E., Westra, M., Russell, J.H. (In Press). Do “Unreasonable” Accommodations for Postsecondary Students Provide Unfair Advantages.

Accommodations for Dyslexics

“The results from this study support the previous research about the efficacy of using accommodations, specifically that people who do not have learning disabilities do not significantly improve performance using extended time on examinations. This fact has been known for many years by learning disability researchers, clinicians, and educators. What is missing though is a general awareness of this fact in the community” (p. 18).

Jenison, M.E., Westra, M., Russell, J.H. (In Press). Do “Unreasonable” Accommodations for Postsecondary Students Provide Unfair Advantages.

Accommodations for Dyslexics

“Fairness is giving each person what he or she needs, not giving each person the same accommodations” (p. 19).

Jenison, M.E., Westra, M., Russell, J.H. (In Press). Do “Unreasonable” Accommodations for Postsecondary Students Provide Unfair Advantages.

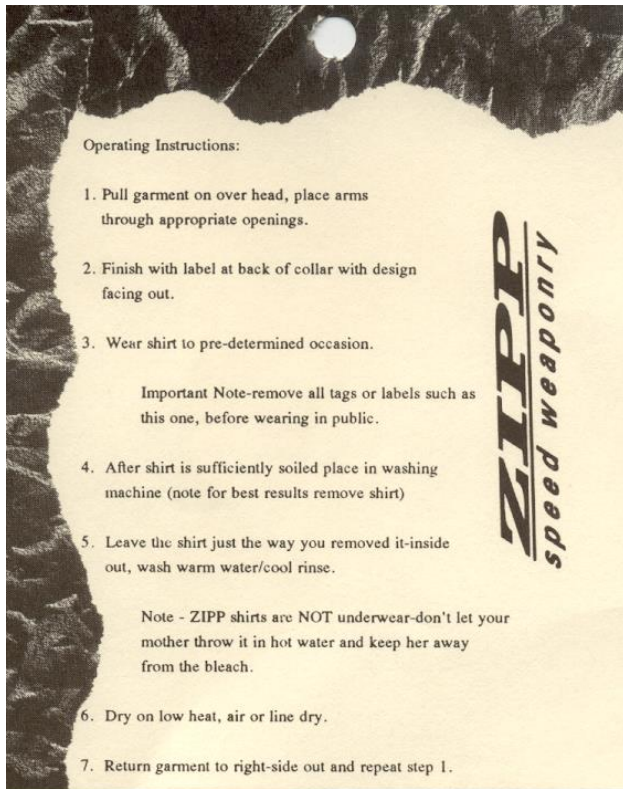


Accommodations for Dyslexics

- State education agencies governing secondary schools often have different disability qualification and documentation requirements for accommodations than do postsecondary institutions.
- Postsecondary institutions often need more information about students to provide appropriate accommodations.

Layton, C.A., Lock, R.H. (2003). Challenges in Evaluating Eligibility Criteria and Accommodation Needs for Postsecondary Students. Learning Disabilities: A Multidisciplinary Journal, 12 (1), pp. 1-5).

Accommodations for Dyslexics



- Recording for the Blind & Dyslexic
- 20 Roszel Road
- Princeton, NJ 08540
- 866-RFBD-585
- Voice: 800-221-4792
- Website: www.rfbd.org

Accommodations for Dyslexics

- Quicktionary Reading Pen II
WIZCOM Technologies, Inc.
257 Great Road
Acton, MA 01720
Voice: 978-635-5357
Fax: 978-929-9228
Web: www.wizcomtech.com



Accommodations for Dyslexics

- Franklin Speaking Language Master Special Edition

Franklin Electronic Publishers

One Franklin Plaza

Burlington, NJ 08016-4907

Voice: 800-266-5626

Fax: 609-239-5948

E-Mail: service@franklin.com

Web: www.franklin.com



Accommodations for Dyslexics

- Kurzweil 3000

Kurzweil Educational Systems, Inc.

14 Crosby Drive

Bedford, MA 01730-1402

Voice: 800-894-5374

Fax: 781-276-0650

E-Mail: info@kurzweiledu.com

Web: www.kurzweiledu.com



Accommodations for Those with Learning Disabilities

Good resources to help decide which accommodations work with which weaknesses:

- Brinkerhoff, L.C., McGuire, J.M., and Shaw, S. (2002). Postsecondary Education and Transition for Students with Learning Disabilities (Second Edition). Austin, TX: Pro-ED.
- Mather, N. and Jaffe, L.E. (2002). Woodcock-Johnson-III: Reports, Recommendations, and Strategies. New York, NY: John Wiley and Sons.

Accommodations For Dyslexics

Lorry suggested the following:



- extended time for slow reading rate;
- a separate room for those who subvocalize while reading;
- audiotape versions of tests;
- a reader;
- assistance with answer sheets (i.e., a scribe)

Accommodations for Dyslexics



- extended breaks;
- Large print; and/or
- copy of verbal instructions read by the proctor

(Lorry, B.J. (1998). Language Based Learning Disabilities. In M. Gordon and S. Kiesser (Eds.), Accommodations in Higher Education Under the Americans with Disabilities Act (ADA): A No-Nonsense Guide for Educators, Administrators and Lawyers. New York, NY: Guilford, pp. 103-153.)

CASE HISTORY



CASE HISTORY

- Graduate School-Graduated with 4.0 with Master Degree; Honors Student
- First Year of Doctoral Program-Hopelessly behind in work, depressed, anxious, socially isolated, works constantly on his assignments; poor social skills; put on probation.
- Major Complaints:
 - Failing in grad school
 - Poor social skills/shyness
 - Lack confidence
 - Depressed and overwhelmed

CASE HISTORY (Continued)

- Adult Male age 26, Anglo
- Upper Middle Class Upbringing
- Unremarkable Medical History
 - Bad Seasonal Allergies
- Both Parents College Educated:
 - Mother BA, Business
 - Father BA, Economics, J.D. Law

CASE HISTORY (Continued)

- Very Difficult Pregnancy and Birth; Mother Almost Died
- 8 pounds 2 ounces at birth; excellent health
- Brother described as incorrigible and chronically unemployed
- Father Alcoholic, Mother Sickly
- One First Cousin Low IQ & One Dyslexic
- Trouble pronouncing words correctly and clumsy as preschooler and great difficulty learning to tie shoes

CASE HISTORY (Continued)

- Primary School very poor student especially in reading; typically lowest reader in class.
- Poor Social Skills, Socially Shy, Socially Isolated, but very verbal
- Got Bullied a lot
- Considered Bright, but Very Lazy
- Speed Reading Classes

CASE HISTORY (Continued)

- Middle School-Became a good student in all but math related courses; “Lazy in Math”
- Math Teacher (“He sees upside down.”)
- Doctor- “He does not see ‘was as saw’. There is no problem.”
- Could not read aloud
- Socially Shy
- Somewhat Isolated
- Good Athlete

CASE HISTORY (Continued)

- High School-Excellent Student, but “Lazy in Math”
- Low Self-Esteem & Depressed & Anxious
- Socially Shy, Poor Social Skills
- Good Athlete
- Could not read aloud, but excellent public speaker
- “Told Story for his graduation”

CASE HISTORY (Continued)

- College-Top university; first three years exceptionally poor grades; almost flunked
- How do you spell “Wash?”
- Overwhelmed, Depressed, Anxious, Socially shy
- Told counselor, “I can’t read and I think I’m death.”
- Graduated in four years-last semester on honor roll

CASE HISTORY (Continued)

- ***What diagnoses would you postulate this individual has?***

CASE HISTORY (Continued)

- Diagnosis:
 - Major Depressive Disorder
 - Social Anxiety Disorder
 - Reading Disorder-Dyslexia
 - Significant high and mid-range frequency bilateral hearing loss – Probably from birth
- ***LET'S COME UP WITH A TREATMENT PLAN***

Kevin T. Blake, Ph.D., P.L.C.



HELPFUL BOOKS FOR PROFESSIONALS AND LOVED ONES



HELPFUL BOOKS FOR PROFESSIONALS AND LOVED ONES

- Mather, N & Goldstein, S. (2001). Learning Disabilities and Challenging Behaviors. Baltimore, MD: Brookes.
- Reid, G. & Fawcett, A. (2004). Dyslexia in Context. Philadelphia, PA: Whurr
- *Nosek, K. (1997). Dyslexia in Adults. Dallas, TX: Taylor.*
- Bartlett, D. & Moody, S. (2000). Dyslexia in the Workplace. Philadelphia, PA: Whurr.
- Goldstein, S. (1997). Managing Attention and Learning Disorders in Late Adolescence & Adulthood. New York, NY: John Wiley & Sons.

**BOOKS IN THIS FONT ARE GOOD FOR THE LAYPERSON*

HELPFUL BOOKS FOR PROFESSIONALS AND LOVED ONES

- Richards, R.G. (1999). The Source for Dyslexia and Dysgraphia. East Moline, IL: LinguSystems.
- Roffman, A.L. (2000). Meeting the Challenge of Learning Disabilities in Adulthood. Baltimore, MD: Brookes.
- Wren, C. & Einhorn, J. (2000). Hanging by a Twig: Understanding and Counseling Adults with Learning Disabilities. New York, NY: Norton.
- Rodis, P., Garrod, A., & Boscardin, M.L. (2001). Learning Disabilities & Life Stories. Boston, MA: Allyn and Bacon.
- Shaywitz, S. (2003). Overcoming Dyslexia. New York, NY: Knopf.

**BOOKS IN THIS FONT ARE GOOD FOR THE LAYPERSON*

HELPFUL ORGANIZATIONS

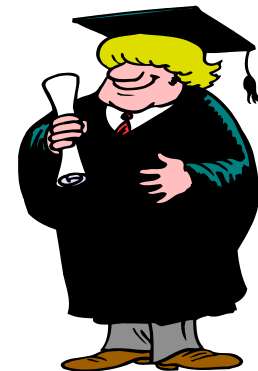


Helpful Organizations

- Learning Disabilities Association (LDA): www.lda.org
- International Dyslexia Association (IDA): www.interdys.org
- Children and Adults with Attention Deficit Disorders (CHADD): www.chadd.org
- National Attention Deficit Disorder Association (ADDA): www.add.org

Helpful Organizations

- Nonverbal Learning Disabilities Association (NLDA): www.nlda@nlda.org
- Asperger Syndrome Coalition of the United States (ASC-US): www.asperger.org
- ADD WareHouse: www.addwarehouse.com
- LinguSystems: www.linguisystems.com



Kevin T. Blake, Ph.D., P.L.C.

- **Case Consultation**
- **Post Secondary Education and Employer Consultation**
 - **Program Development**
 - **Staff Training & Conference Presentations-
Learning Disorders, Dyslexia, AD/HD,
Autism Spectrum Disorders; Children,
Adolescents & Adults**
- **520-327-7002**
- **kblake@theriver.com**