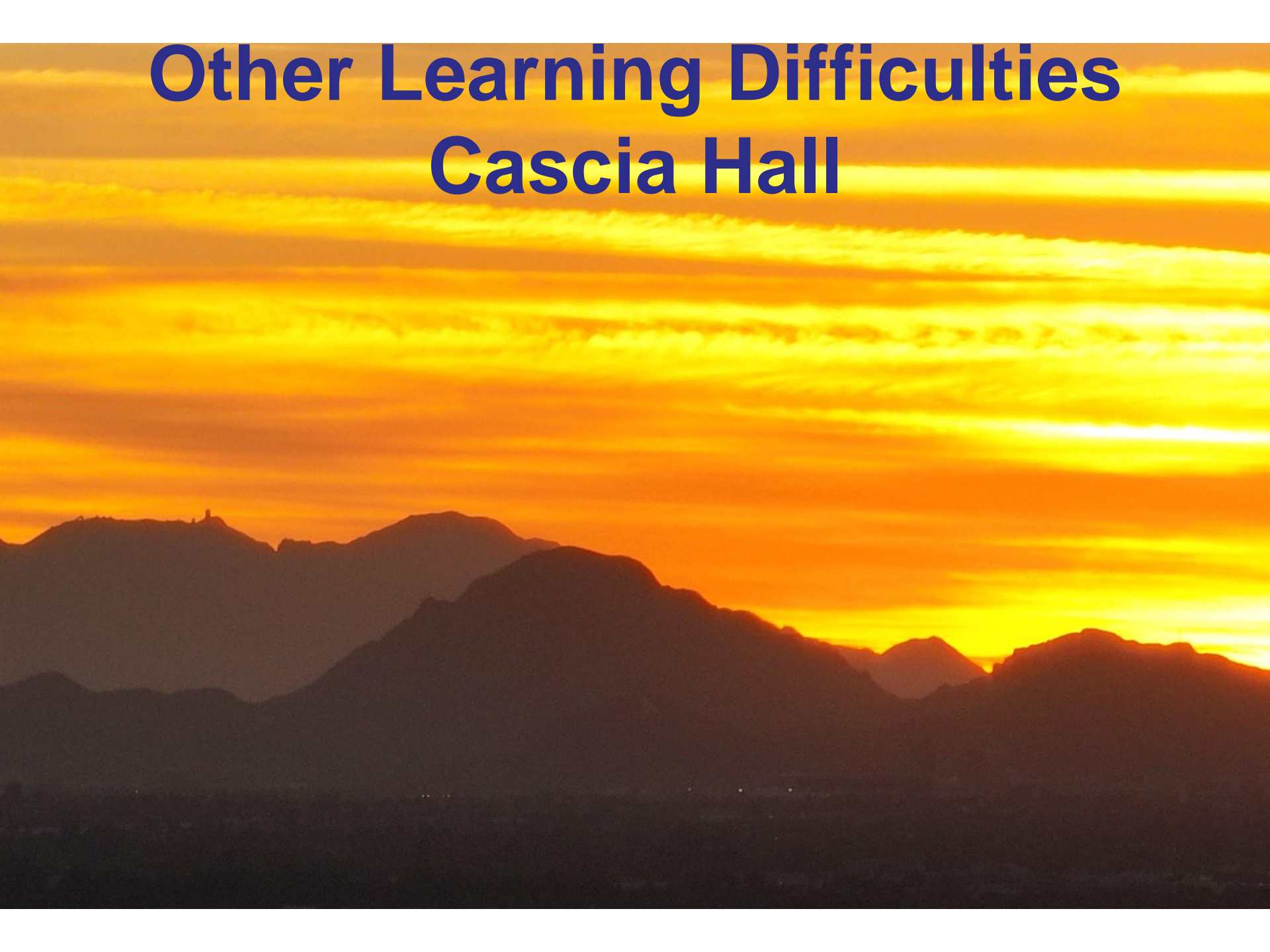


Other Learning Difficulties

Cascia Hall



Speech and Language Disorders



Speech and Language Disorders



- Nicholas Cummings' story of the social phobic male who stuttered.

Cummings, N. (1991). Targeted Intermittent Therapy Throughout the Life Cycle. Workshop presented at the Annual Arizona Psychological Association State Conference, Scottsdale, AZ.

Speech and Language Disorders



- “A language disorder differs from a speech disorder. Speech disorders are abnormalities of speech, as articulation difficulties..., voice disorders..., or fluency...Language disorders are much broader, encompassing disorders of the entire spectrum of communication and verbal behavior, including such problems as delayed speech; disorders of vocabulary, word meanings, or concept formations; misapplication of grammatical rules and syntax; and poor language comprehension” (Lerner, 1997, p. 370).

Lerner, J. (1997). Learning Disabilities: Theory, Diagnosis and Teaching Strategy, Seventh Edition. Boston, MA: Houghton Mifflin, p. 370.

Speech Disorders



- Voice: “...is generated from the lungs as the vocal folds are brought closer together. The vocal folds vibrate when air is pushed past them with sufficient pressure...”
 - An estimated 7.5 million in the US have problems with loudness, pitch and quality.

National Institute of Deafness and Other Communication Disorders (May 8, 2002).
Health Information: Voice, Speech and Language. From NISCD website:
www.nidcd.nih.gov , p. 2.

Speech Disorders



- “Speech is produced by precisely coordinated muscle actions in the head, neck, chest and abdomen. Speech Development is a gradual process that requires years of practice...It is estimated that by first grade five percent of children have noticeable speech disorders”

National Institute of Deafness and Other Communication Disorders (May 8, 2002).
Health Information: Voice, Speech and Language. From NISCD website:
www.nidcd.nih.gov , p. 3.

Other Language Problems



- “Phonology is the system of speech sounds in a language” (p. 363)
- “Morphology is the system of meaning units in a language” (P. 363).
- “Syntax refers to the grammar of language-the way words are strung together to form sentences” (p. 364).
- “Semantics refers to word meanings in language” (p. 365).

Lerner, J. (1997). Learning Disabilities: Theory, Diagnosis and Teaching Strategy, Seventh Edition. Boston, MA: Houghton Mifflin.

Other Language Problems



- Pragmatics is the social side of language, dealing with the relationship between the speaker and the context...the relationship between the speaker and the listener...” (p. 365).

Lerner, J. (1997). Learning Disabilities: Theory, Diagnosis and Teaching Strategy, Seventh Edition. Boston, MA: Houghton Mifflin.

Other Language Problems



- ***“Receptive Language Difficulties*** Receptive language involves understanding what is spoken or written by others and relating speech to words and meaning. People with receptive language problems tend to have a limited vocabulary and often fail to understand the subtleties of figurative speech. Slow to respond to verbal stimuli and requiring extra time to process verbal input, they frequently appear...

Other Language Disorders



- “...puzzled when given oral instructions and may need directions repeated several times before they are able to grasp what it is they are being asked to do. These individuals are often challenged when asked to learn rules of a new game or to understand explanations of new procedures” (p. 17)

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

Other Language Disorders



- ***“Expressive Language Disorder*** Difficulty producing language by speaking or writing is known as, expressive language disorder. Adults with this problems area may appear nonfluent at times as they stammer, or use ‘uh’ excessively. They may omit, substitute, distort, or add sounds in words. Further they may often search for words and may refer to ‘whatchamacallit’ and ‘whoosit’ on a fairly regular basis, or they may use definitions for objects whose name they cannot recall...

Speech and Language Disorders



- Comorbidity with LD, NVLD, AD/HD and Asperger's
 - Lyon reported that children with language disorders and/or speech and language disorders are at high risk for psychiatric comorbidity.

Lyon, G.R. (1996). Learning Disabilities. In E.J. Marsh and R.A. Barkley (Eds.), Child Psychopathology. New York, NY: Guilford, pp. 390-435.

- Clark wrote: “Follow-up studies of children diagnosed as having specific language impairment (SLI) have shown the incidence of reading disability to be 90 percent or greater...”

Clark, D.B. (1988). Dyslexia: Theory & Practice of Remedial Instruction. Parkton, MD: York, p. 30.

Speech and Language Disorders



- Wilkins, Garside and Enfield (1993) indicated early signs of Dyslexia are:
 - Difficulty learning to talk
 - Difficulty listening and following directions
 - Difficulty remembering
 - Difficulty pronouncing words correctly and/or expressing thoughts clearly

Wilkins, A., Garside, A. and Enfield, M.L. (1993). Basic Facts About Dyslexia: What Everyone Ought to Know. Baltimore, MD: Orton Dyslexia Society.

Speech and Language Disorders



- S and L with Dyslexia
 - ...most dyslexics do not demonstrate these overt language impairments...most of them exhibit less discernible language-based deficits, such as phonological processing problems and lack of metalinguistic awareness...(Clark, 1988, p. 30)

Clark, D.B. (1988). Dyslexia: Theory & Practice of Remedial Instruction. Parkton, MD: York, p. 30.

Speech and Language Disorders



- Barkley (2002) reported:
 - 10 to 54% of those with AD/HD have Expressive Language Disorders
 - 60% of those with AD/HD have Pragmatic Disorders -They speak at you not to you.
 - They have delayed internalization of speech and have poor memory for verbal sequences.

Barkley, R.A. (2002). ADHD and Oppositional Defiant Children. Seminar presented February 19-20, 2002, Phoenix, AZ.

Speech and Language Disorders



- Asperger's Disorder and Semantic Pragmatic Language Disorder (SPLD):
 - “Common features are echolalia, poor conversation turn taking, unusual prosody, difficulty in accommodating the perspective of others, superficially good syntax with odd or inappropriate semantic content...repetitive interests and all have odd social play” (Attwood, 1998, p. 146).

Attwood, T. (1998). Asperger's Syndrome: A Guide for Parents and Professionals. Philadelphia, PA: Jessica Kingsley.

Speech and Language Disorders



- Spontaneous Speech: Speaker has control and can take time to formulate ideas
- Demand Speech: Listener has control and speaker cannot take time to organize thoughts.

Silver, L. (1992). The Misunderstood Child: Guide for Children with Learning Disabilities, Second Edition. Blue Ridge Summit, PA: Tab Books.

Stuttering



- What is it?
 - “Stuttering is a disorder of speech fluency that interrupts the forward flow of speech. All individuals are disfluent at times, but what differentiates the person who stutters from someone with normal speech is the kind and amount of disfluencies” (p. 1).

American Speech-Language Hearing Association (May 10, 2002). Stuttering. From website: www.asha.org/speech/disabilities/stuttering.cfm , p. 1-5.

Stuttering



- **“What is stuttering?** Stuttering is a communication disorder in which the flow of speech is broken by repetitions (li-li-like this), prolongations (llllike this), or abnormal stoppages (no sound) of sounds and symbols. Their may be unusual facial and body movements associated with the effort to speak” (P. 1).

(Stuttering Foundation of America, May 10, 2002). Frequently Asked Questions about Stuttering. From website: www.206.104.238.56/faq.htm, p.1-2.

Stuttering



- “...The speech disruptions may be accompanied by rapid eye blinks, tremors of the lips and/or face or upper body that a person who stutters may use in an attempt to speak. Certain situations, such as speaking before a group or talking on the telephone, tend to make stuttering more severe, whereas other situations, such as singing or speaking alone, often improve fluency” (p. 1).

National Institute of Deafness and Other Communication Disorders (May 10, 2002). Health Information: Stuttering. From website: www.nidcd.nih.gov/health/pubs_vsl/stutter.htm, p. 1-6.

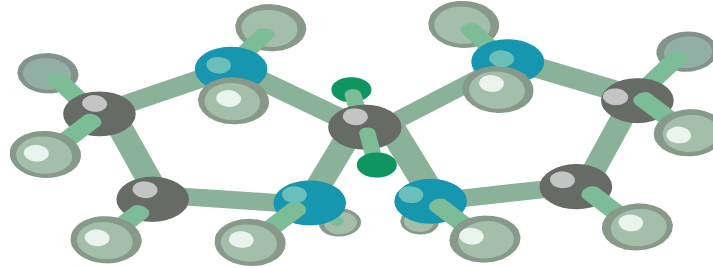
Stuttering

- “Most stutterers can recite poems or sing with relative ease but conversation can be distressing” (p. 53).

Neumann, K. (October/November 2006). Verbal Bottleneck. Scientific American: Mind, 17 (3), pp. 50-55.



Stuttering

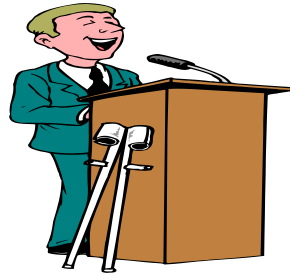


- There is probably a genetic component to stuttering.
- Developmental Stuttering: Child's speech and language abilities are not able to meet their verbal demands. This type is usually outgrown.
- Neurogenic Stuttering: Poor neurological coordination; may be caused by stroke or brain injury.

National Institute of Deafness and Other Communication Disorders (May 10, 2002).

Health Information: Stuttering. From website:

www.nidcd.nih.gov/health/pubs_vs/stutter.htm. p. 1-6.



Stuttering

- What causes Stuttering?
 - 1928 Orton and Travis speculated that stuttering had a neurobiological basis.
 - PET scans of untreated stutters indicate higher activation of both hemispheres, especially the right than non-stutters.
 - Stutters monitor their speech more, their speech is more effortful and less automatic.

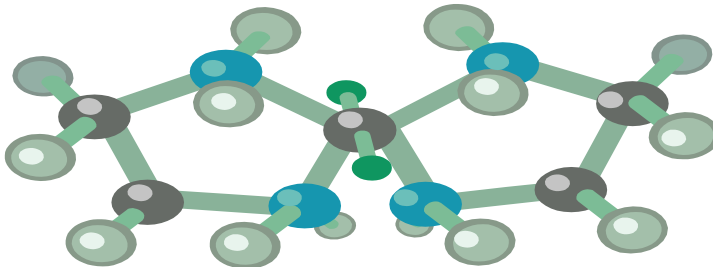
Kroll, R.M., and De Nil, L.F. (September 30, 2003). Neural Basis of Stuttering and Its Treatment. Stuttering Foundation of America. From website: www.stuttering.org/Research/Kroll.htm.

Stuttering



- “We still do not know what causes stuttering. It may be caused by different factors for different people...” (American Speech-Language Hearing Association, May 10, 2002, p. 4).

American Speech-Language Hearing Association (May 10, 2002). Stuttering. From website: www.asha.org/speech/disabilities/stuttering.cfm , p. 1-5.



Stuttering



- After reviewing the of results PET studies of adults who stutter and were given speech therapy Kroll and De Nil (September 30, 2003) concluded:
 - Stutters demonstrate atypical brain activation which is connected to a neurological underpinning.
 - There appears to be an acquired and innate aspect to stuttering.
 - The right hemisphere overactivation persists over a year post treatment. Points to congenital basis.

Kroll, R.M., and De Nil, L.F. ((September 30, 2003). Neural Basis of Stuttering and Its Treatment. Stuttering Foundation of America. From website: www.stuttering.org/Research/Kroll.htm.

Stuttering



- **“There is no reason to believe that emotional trauma causes stuttering”** (p. 1).

(Stuttering Foundation of America, May 10, 2002). Frequently Asked Questions about Stuttering.
From website: www.206.104.238.56/faq.htm, p.1-2.

- We know that children who stutter are no more likely to have psychological problems than children who do not stutter. In general there is no reason to believe that emotional trauma causes stuttering (p. 4-5).

American Speech-Language Hearing Association (May 10, 2002). Stuttering. From website:
www.asha.org/speech/disabilities/stuttering.cfm , p. 1-5.

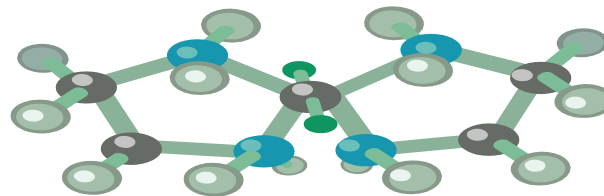


Stuttering

- The **SPEECH 1 GENE** on chromosome 7
- Genes on chromosome 18 and 13 appear to be involved in some forms of stuttering.

Drayna, D. (May 10, 2002). Recent Developments Highlight Genetic Causes in Speech Disorders. From Stuttering Foundation of America website:
www.206.104.238.56/Researchdrayna2.htm.

Drayna, D. (Fall, 2003). Scientists Find Gene that Predisposes Individuals to Stuttering. Stuttering Foundation Newsletter. From website:
www.stutteringhelp.org.



Stuttering



- “...to produce speech, the brain must generate sets of neural commands to produce the right amount and timing of muscle activity in a large number of muscles, including those that control breathing, voice and oral movements. During disfluent speech of children and adults who stutter, it is clear that the brain does not accomplish this. Our research ... suggests that, although stuttering is expressed as a failure of the motor areas of the brain...”

Stuttering



- “... to generate the right muscle commands for speech to proceed, the explanation of why this happens involves the interaction of the brain’s motor areas with other brain systems, including those involved in emotional, cognitive, and linguistic processing...the motor areas of the brain cannot perform as well in generating muscle commands” (p. 1).

Smith, A. (September 30, 2003). Research Studies Interaction of Language and Motor Processing in Stuttering. Stuttering foundation of America; From website: www.stutteringhelp.org/Research/asmith.htm.

Stuttering



- The severity of stuttering lessens with time in those who suffer with it.
- But, they will continue to stutter with increased speech demands.

Smith, A. (September 30, 2003). Research Studies Interaction of Language and Motor Processing in Stuttering. Stuttering foundation of America; From website:

www.stutteringhelp.org/Research/asmith.htm.

- The ratio is 4 to 1 in favor of males.

Riley, G. (May 10, 2002). Medical Aspects of Stuttering From Stuttering Foundation of America website: www.206.104.56/Research/olanzapn.htm, pp.1-4.

Stuttering



- PET scans of stutters indicate low activity in Broca's area and the striatum. Other studies show these areas have elevated dopamine levels.

Yeoman, B. (November/December, 1998). Wrestling with Words. Psychology Today. Reprinted on website: www.Mankato.msus.edu/dept/comdis/kluster/infodstuttering/yeoman.html, p. 1-7.

- Stuttering shares much commonality with Tourette's Syndrome: both wax and wane, both worsen with anxiety, both are caused by excess dopamine in the striatum/basal ganglia.

Riley, G. (May 10, 2002). Medical Aspects of Stuttering From Stuttering Foundation of America website: www.206.104.56/Research/olanzapn.htm, pp.1-4.

Stuttering



- Stutterers may have flawed sound processing in the left hemisphere's Wernicke's area. In non-stutters this area gives us feedback on whether their spoken words are correct. Stutterers may not be able to hear their spoken words accurately
- Also the nerve fibers in the lower part of the speech cortex of stutters appear to be altered.

Neumann, K. (October/November 2006). Verbal Bottleneck. Scientific American: Mind, 17 (3), pp. 50-55.

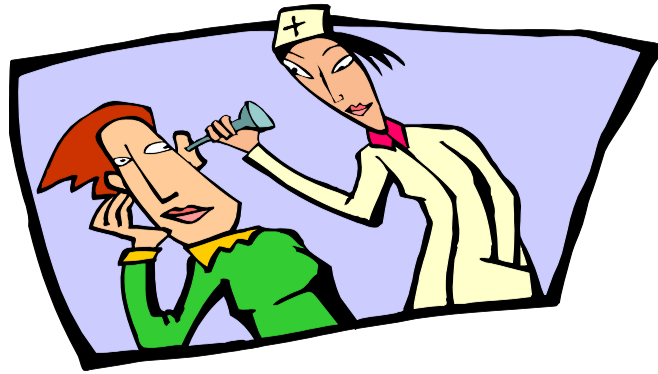
Stuttering



- Adults with Persistent Developmental Stuttering (PDS) have significantly different volumetric MRI scans in right and left planum temporale and unique gyrification patterns. There are also anomalies in the perisylvian areas.
- Men and women may have gender specific differences.
- There may be differences between right and left handed stutters.

Foundas, A.L. (September 30, 2003). Are The Brains of People Who Stutter Different? Stuttering Foundation of America website:
www.stutteringhelp.org/Research/foundas.htm.

Diagnosis



- “Stuttering is usually diagnosed by a speech-language pathologist, a professional who is specially trained to test and treat individuals with voice, speech and language disorders. The diagnosis is usually based on the history of the disorder, such as when it was first noticed and under what circumstances, as well as a complete evaluation of speech and language abilities” (p. 3).

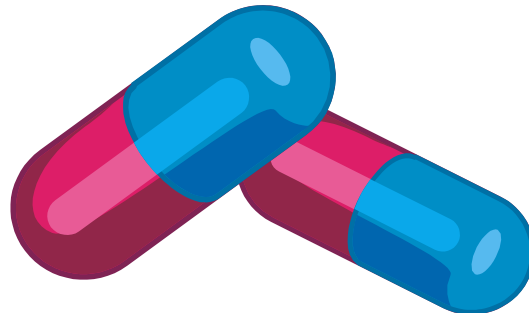
National Institute of Deafness and Other Communication Disorders (May 10, 2002).
Health Information: Stuttering. From website:
www.nidcd.nih.gov/health/pubs_vs/stutter.htm. p. 1-6.

Stuttering



- Medications that can help:
 - Strattera has been found to significantly reduce Tics and Stuttering.

Ricardi, R. (February 17, 2004). Recognition, Diagnosis and Treatment of Adults with Attention-Deficit /Hyperactivity Disorder: Clinical Perspectives. Strattera Clinical Investigator, Pharmaceutical seminar sponsored by Eli Lilly, Inc, Tucson, AZ.



Treatment



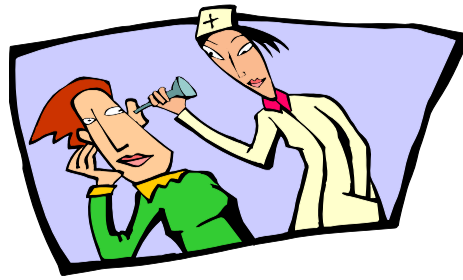
- Currently there is no cure
- There are a variety of treatments. All help to some extent.
- Many programs focus on relearning how to speak.
- The emotional overlay should be addressed.
- Medications and electronic devices can be helpful to some extent.
- If the person struggles for 6 months get them help!

National Institute of Deafness and Other Communication Disorders (May 10, 2002).

Health Information: Stuttering. From website:

www.nidcd.nih.gov/health/pubs_vs/stutter.htm. p. 1-6.

Treatment



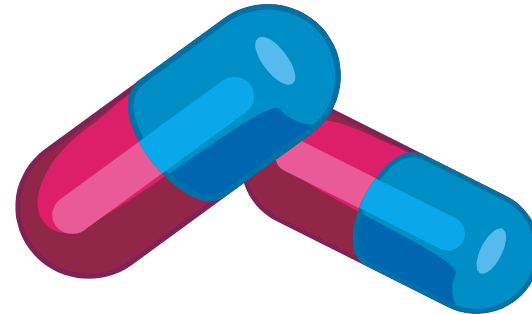
- Stuttering Modification Therapy: Stutterers are taught “Pseudostuttering”; They stutter on purpose which causes them to eventually no longer fear them.
- Fluency Shaping: First stutters are taught a new speech pattern, then they are taught stress timing, soft voicing, and how to have smooth transitions between sounds and breaths, then there is one year of intense follow-up. Two-thirds of patients respond even after 2 years of follow-up.
- Indirect Therapy: Parents are taught different ways to speak to their children who stutter. They speak slower with simpler sentence structures.

Neumann, K. (October/November 2006). Verbal Bottleneck. Scientific American: Mind, 17 (3), pp. 50-55.

Stuttering

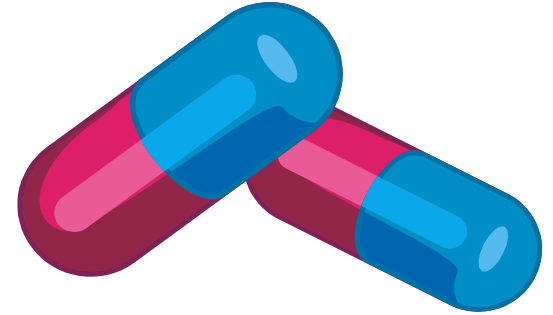


- Other Medications that can help:
 - Olanzapine/Zyprexa
 - Risperidone/Risperdal
 - Alprazolam/Xanax
 - Citalopram/Celexa
 - Clomipramine/Anafranil



Riley, G. (May 10, 2002). Medical Aspects of Stuttering From Stuttering Foundation of America website: www.206.104.56/Research/olanzapn.htm, pp.1-4.

Stuttering



- “Riley wrote, “Even if some medications can be demonstrated to be useful in reducing the frequency and severity of stuttering, they will not provide total treatment. Rather, each person who stutters needs to work with a speech-language pathologist who specializes in stuttering to work out a comprehensive therapy program in which the use of a given medication may play a part” (p. 4)

Riley, G. (May 10, 2002). Medical Aspects of Stuttering From Stuttering Foundation of America website: www.206.104.56/Research/olanzapn.htm, pp.1-4.

Helpful Websites About Stuttering



- American Speech-Language Pathology Hearing Association (ASHA): www.asha.org
- American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS): www.entnet.org
- National Counsel on Stuttering: E-mail: cdugan@uic.edu
- National Stuttering Association: www.nsastutter.org
- Stuttering Foundation of America: www.stutter@stutterhelp.org



Helpful Websites About Stuttering



- International Stuttering Association (ISA): E-mail: stutter.isa@NewMail.net
- National Institute on Deafness and Other Communication Disorders (NIDCD): www.nidcd.nih.gov
- Plus, all the aforementioned mental health professional organizations.



Synesthesia, Learning Disorders and AD/HD



What is a Synesthesia?



“This is a rare condition that is not unique to people with Asperger’s Syndrome (LD and/or AD/HD-sic). The person experiences sensation in one sensory system and as result experiences a sensation in another modality. The most common expression is seeing colors every time the person hears a particular sound. This is called colored hearing” (p. 138).

Attwood, T. (1998). Asperger Syndrome: A Guide for Parents and Professionals. Philadelphia, P.A.: Jessica Kingsley.

Synesthesia



“This cross-modal sensation is reproducible in a given individual during their lifetime, so that a given sound or word always leads to perception of the same color. Because of its curious phenomenology and its failure, usually to lead to significant problems in daily living, its existence has appeared hidden from medicine, including neuroscience, for the latter part of the century” (p. X).

Cole (1993). Forward. In R. Cytowic (Author), The Man Who Tasted Shapes: A Bizarre Medical Mystery Offers Revolutionary Insights Into Reasoning, Emotion, and Consciousness. New York, NY: Putman.

Synesthesia



“‘Oh Dear’, he said (Michael), slurping a spoonful, ‘there aren’t enough points on the chicken’”(p.3). Michael continued, “‘You’re a neurologist, maybe it will make sense to you I know it sounds crazy, but I have this thing, see, where I taste by shape’”(p.4). Cytowic (1993) replied, “‘Where do you feel these shapes?’” To which Michael replied, “‘All over...but mostly I feel things rubbed against my face or sitting in my hands’” (p. 4).

Cytowic, R. (1993). The Man Who Tasted Shape: A Bizzare Medical Mystery Offers Revolutionary insights Into Reasoning, Emotion, and Consciousness. New York, NY: Puttman.

Synesthesia



- “The latest scientific studies have found that as many as one in 100 people is synaesthetic” (p. 2 of 3).
- Often they score in the Superior range on I.Q.
- They often are left handed, have left -right confusion, and are Dyscalculic.
- High rates of Dyslexia and Autism in relatives

Author (June 2008). Derek tastes of Earwax. BBC Science & Nature: TV and Radio Follow-up. From: http://www.bbc.co.uk/tvradio/programs/horizon/derek_qa.shtml .

Carpenter, B. (March, 2001). Everyday Fantasia: The World of Synesthesia. Monitor On Psychology, 32 (3), pp. 26-29.

Cytowic, R. (1993). The Man Who Tasted Shape: A Bizzare Medical Mystery Offers Revolutionary insights Into Reasoning, Emotion, and Consciousness. New York, NY: Puttman.

Synesthesia



- They are probably inherited by one gene.
- There appears to be 6 women to every man who has one.

Cole, (1993) Forward. In Cytowic, R. (Author) R. The Man Who Tasted Shape: A Bizzare Medical Mystery Offers Revolutionary insights Into Reasoning, Emotion, and Consciousness. New York, NY: Puttman.

Synesthesia



- People with Synesthesias tend to be more creative than the general population:
 - They appear to have an exceptional ability to use metaphor.
 - Their brains seem to be set up to connect unrelated cognitions.

Ramachandran, V.S., and Hubbard, E. (May, 2003). Hearing Colors, Tasting Shapes: People With Synesthesia—Whose Senses Blend Together—Are Providing Important Clues to Understanding the Organization and Functions of the Human Brain. Scientific American.com. From website: www.sciam.com/article.cfm?articleID=00030114B-9D06-1E8FA5809EFC5880000.

Synesthesia



“Using positron-emission tomography and functional magnetic imaging researchers have found that in synesthetes who report colored hearing, the visual area of the brain shows increased activation in response to sound. That isn’t the case with nonsynesthetes. Other studies have demonstrated that synesthetic perception occurs involuntarily and interferes with ordinary perception” (p. 27).

Carpenter, B. (March, 2001). Everyday Fantasia: The World of Synesthesia. Monitor On Psychology, 32 (3), pp. 26-29.

Synesthesia



- “Studies have confirmed that the phenomena is biological and apparently unlearned, distinct from hallucination and metaphor” (. 27).

Carpenter, B. (March, 2001). Everyday Fantasia: The World of Synesthesia. Monitor On Psychology, 32 (3), pp. 26-29.

- “Cross wiring” in the fusiform gyrus and angular gyrus appear to be related to synesthesia.

Ramachandran, V.S., and Hubbard, E. (May, 2003). Hearing Coulrs, Tasting Shapes: People With Synesthesia—Whose Senses Blend Together—Are Providing Important Cluesto Understanding the Organization and Functions of the Human Brain. Scientific American.com. From website: www.sciam.com/article.cfm?articleID=00030114B-9D06-1E8FA5809EFC5880000.

Types of Synesthesia

- Colored hearing
- Phonism-other senses being heard
- Conceptual Synesthesia-Seeing time as symbol
- Synesthesialgia- Painful synesthesia: Deaf man who hears what he sees (Cytowic, 1993).
- LSD Induced
- Photographic memory
- Sensory deprivation induced



Types of Synesthesia

- Temporal lobe epilepsy induced
- There may be as many as 50 types of synesthesias

Ramachandran, V.S., and Hubbard, E.M., (April 14, 2003). Hearing Colors, Tasting Shapes: Common Questions, Scientific American.com, from website:

www.sciam.com/article.cfm?articleID=000C2CEC-A4FE-1E8F-8EA5809EC5880000 .



Not all Students Who get the Correct Answer but Cannot Show Their Work Are Cheating

- Some synaesthetes (60%) calculate by seeing numbers in space around them often in a number line.
- The correct answer just appears to them; they cannot explain why, or how it does. It just does.
- They are not cheating. Test and proctor them by themselves.

Author (June, 2008). Derek Tastes of Earwax. BBC-Home. Science and Nature Follow-up: http://www.bbc.co.uk/sn/tvradio/programmes/horizon/derek_qa.shtml

Treating Synesthesias



- Most synesthetes would not like to have their synesthesias removed.
- “At a practical level, many researchers observe, research on synesthesia will help raise the condition’s visibility, reducing the risk that clinicians might make it a sign of mental illness.

Carpenter, B. (March, 2001). Everyday Fantasia: The World of Synesthesia. Monitor On Psychology, 32 (3), pp. 26-29.

Treating Synesthesia

- A Referral to a **Behavioral Neurologist/Neuropsychiatrist** is recommended:



- They specialize in the behavioral aspects of dementia and memory disorders, neurobiological disorders (i.e., dyslexia, AD/HD, etc.), how to use medications with such populations, as well as some neuropsychology and psychiatry.

www.anpaonline.org

Treating Synesthesia



- Caring for the emotional overlay:
 - American Psychiatric Association:
www.apa@psych.org
 - American Psychological Association:
www.apa.org
 - National Association of Social Workers:
www.nasdc.org
 - National Board of Certified Counselors:
www.nbcc@nbcc.org

Treating Synesthesia

- Seek out a world class pain control clinic:
- American Pain Society:
www.info@ampainsoc.org



Treating Synesthesia



- American Synesthesia Association:
www.web.mit.edu/synesthesia/www/synesthesia.html
- International Synesthesia Association:
www.psychiatry.cam.ac.uk/isa/
- www.mixsig.net
- The Synesthetic Experience:
www.web.mit.edu/synesthesia/www/

Developmental Coordination Disorder



Balance and Coordination Disorders



- Children with Coordination Disorders tend to have:
 - Poor Social Competence
 - Low Self-Esteem
 - Reluctance to engage in Physical Activities

Fox, A.M. (Summer, 1998). Clumsiness In Childhood: Developmental Coordination Disorder. Learning Disabilities, 9 (2), pp. 57-64.

Developmental Coordination Disorder

- “I’ve always felt like a klutz. I’m not a good runner. I move quickly. I’m full of energy. But I’m not the most graceful person! Or if your talking sports, in grammar school, I got benched a lot because they didn’t want me for a team...Hitting the ball would be a fluke” (p. 150). –Hannah w/ NVLD
- Poor academics keep disabled children out of sports and clubs.

Wren, C. (2000). Hanging by a Twig. New York, NY: Norton.



Developmental Coordination Disorder

“Learning to ride a bike, play board games, cards, and sports are all supposed to be fun and a normal part of growing up, but they are difficult for anyone with a spatial learning disability. Being accepted is paramount to any fourth grader. I desperately wanted to do the same things I saw the other kids doing...” (Britt Neff, p. 42).

Neff, B., Neff-Lippman, J., and Stockdale, C. (2002). The Source for Visual-Spatial Disorders. East Moline, IL: LinguiSystems,



Manifestation of DCD

- Significant delays in motor milestones
- Poor sports performance
- Poor Handwriting
- Drop things often
- Clumsy



Harris, Z. (October 27, 2006). ADHD and DCD: The Double WHAMMY. Paper presented at the 18th Annual CHADD International Conference, Chicago. IL.

Developmental Coordination Disorder

- People with AD/HD may have a significantly reduced life expectancy due to an impulsive lack of concern for health related issues, exercise, diet, drugs, etc.

Barkley, R.A. (1998). Attention-Deficit Hyperactivity Disorder, Second Edition. New York, NY: Guilford.



Developmental Coordination Disorder



- People with Asperger's Disorder often cannot relate to the feeling of satisfaction, etc. of being on a team.
- If they do participate in sports they will have a better chance in individual sports more often.

Attwood, T. (1998). Asperger's Syndrome: A Guide for Parents and Professionals. Philadelphia, PA: Jessica Kingsley, p. 103.

Developmental Coordination Disorder (DCD)



- These children have significant difficulty learning and internalizing tasks. It's not the timing of when they learn the tasks.

Fox, A.M. (Summer, 1998). Clumsiness In Childhood : Developmental Coordination Disorder. Learning Disabilities, 9 (2), pp. 57-64.

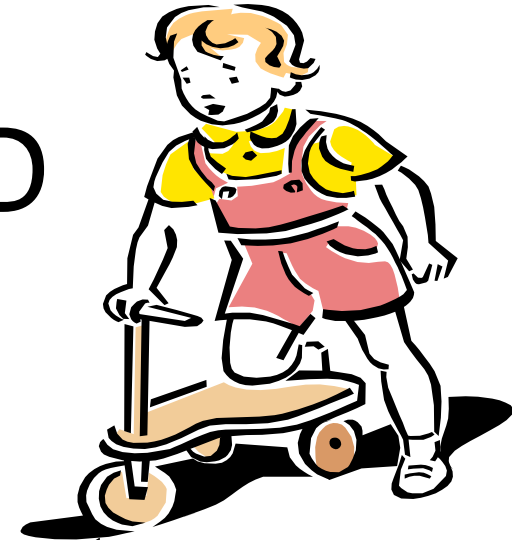
Subtypes of DCD



- Ideational Motor Planning
- Nonverbal Learning Disorders
- Proprioception and Kinesthetic Disorders
- Minimal Cerebral Palsy (CP)
 - 60% of children with CP outgrow their CP symptoms

Blondis, T.A. (October 18, 2002). FC1-The Association of Developmental Coordination Disorder (DCD) and AD/HD. Lecture presented at the 14th Annual CHADD Conference, Miami Beach, FL.

Comorbidity and DCD



- 80% of Dyslexics have coordination problems
- 55% of those with AD/HD have DCD
- Those with NVLD often have psychomotor problems on their body's left side.
- 50-90% of those with Asperger's Disorder have coordination problems

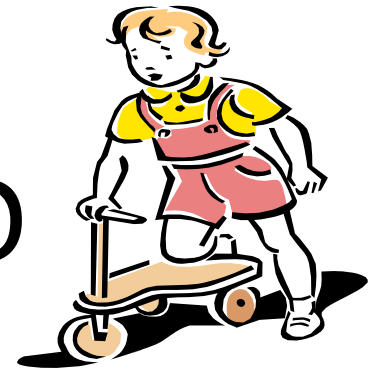
Fawcett, A.J., and Nicolson, R.I. (2001). The Role of the Cerebellum . In A. J. Fawcett (Ed.), Dyslexia: Theory and Good Practice. Philadelphia, PA: Whurr, pp. 89-106.

Gillberg, C. (2001). ADHD with Comorbid Developmental Coordination Disorder: Long-Term Outcome in a Community Sample. ADHD Report, 9 (2), pp. 5-9.

Wren, C. (2000). Hanging by a Twig. New York, NY: Norton, p, 150.

Attwood, T. (1998). Asperger's Syndrome: A Guide for Parents and Professionals. Philadelphia, PA: Jessica Kingsley, p. 103.

Treatment and DCD



- Children with DCD need to learn to verbally mediate to work around their coordination difficulties.

Blondis, T.A. (October 18, 2002). FC-1 The Association of Developmental Coordination Disorder (DCD) and AD/HD. Lecture presented at the 14th Annual CHADD International Conference, Miami, FL.

Treatment and DCD



- Cognitive Orientation to Occupational Performance (CO-OP):
 - Teaches cognitive strategies to overcome DCD
 - Hand over hand techniques
 - Repetition and corrective feedback

Fox, A. M. (Summer, 1998). Clumsiness in Childhood: Developmental Coordination Disorder. Learning Disabilities, 9 (2), pp. 57-64.

Smith, I. (2000). Motor Functioning and Asperger's Syndrome. In A. Klin, F. Volkmar, and S.S. Sparrow (Eds.), Asperger's Syndrome. New York, NY: Guilford, pp. 97-124.



DCD and Helpful Professionals

- American Occupational Therapy Association: www.aota.org
- American Physical Therapy Association: www.apta.org
- American Speech-Language Therapy Association: www.professional.asha.org
- Behavioral Neurologists: www.anpaonline.org
- Mental Health Professionals
- Neuro-Ophthalmologists: www.ama-assn.org

Developmental Coordination Disorder (DCD) and Balance



DCD and Balance



- Children with DCD have poor muscle tone and need to develop strength.
- Dyslexics have trouble with balance & motor skills, processing speed and working memory, especially with competing tasks.

Blondis, T.A. (October 18, 2002). FC-1 The Association of Developmental Coordination Disorder (DCD) and ADHD. Lecture presented at the 14th Annual CHADD International Conference, Miami Beach, FL.

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

DCD and Balance



- Dyslexics have abnormal postural reflexes and reflexes in general.
- These abnormalities can cause problems with riding a bike, skipping, hopping, throwing and catching a ball, swimming, fine motor skills, etc.

Goddard Blythe, S. (April, 2001). Neurological Dysfunction as a Significant Factor in Children Diagnosed with Dyslexia. Paper presented at the British Dyslexia Association 5th Annual Conference, University of York, England.

DCD and Balance



- Body Core=Trunk and Pelvis...provides the body “breaks” to slow down movement
- Legs and arms as well as muscles attach to spine and torso. The spine and torso provide a base.
- The body core is also the body’s center of gravity.

(September 23, 2003). Strength Training and Stability. From website:
<http://www.benning.army.mil/usapfs/Training/Strength/>

DCD and Balance

- NIH Study of ***T'ai Chi Chuan***
 - Improved balance in older adults by 50%

Hain, T.C., Fuller, L. . Weil, L. , & Kotsias, J. (1999). Effects of Tai Chi on Balance. 125, pp. 1191-1195.





DCD and Balance

- Nowicki and Duke spoke of “Resting Posture” which is the posture one assumes when one is not feeling anything of note and is in a neutral position. Those with Expressive Dyssemia tend to use Resting Posture inappropriately.
- This may also be caused by poor core body strength.

Nowicki, S., and Duke, M. (2002). Will I Ever Fit In? New York, NY: Free Press.

DCD and Balance



- Treatment:
 - Core strength and control can be developed by balance and stabilization training.
(September 23, 2003). Strength Training and Stability.
From website:
<http://www.benning.army.mil/usapf/Training/Strength>
 - American Physical Therapy Association: www.apta.org
 - American Occupational Therapy Association: www.aota.org
 - American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS): www.entnet.org

DCD and Balance

- ***Possible Alternative Treatment***

- NIH Emory University video tape:

- Dr. Xu's Tai Chi Research Center

- P.O. Box 98426

- Atlanta, GA 30359

- More Research***

- Needed!***



Possible Alternative Treatment for Balance Problems

- Power Plate
 - Developed for Russian Mir Space Station Cosmonauts
 - Said to treat osteoporosis & balance problems
 - ***More research needed!***

From Website: www.powerplateUSA.com

Image From Website:

www.costco/browse/product.aspx?Prodid=1100564&whse=&Browse=



DCD and Balance



- **Alternative Therapy:**
 - Neuro-Developmental Delay and its treatment.
 - Institute for Neuro-Physiological Psychology (INPP)
 - Primitive Reflexes
 - Peter Blythe and Sally Goddard Blythe
 - ***No Research indicates this is true!***

Goddard, S. (2002). Reflexes, Learning and Behavior: A Window into The Child's Mind. Fern Ridge Press.

Neuropsychological Deficits Underlying Social Skills Weaknesses and Strategies for Remediation

International Dyslexia Association 58th
Annual Conference

Dallas, Texas

Thursday November 1, 2007

10:30 AM to 12:00 PM

Session: T-8

Presenters:

Kevin T., Blake, Ph.D., P.L.C. – Tucson, AZ

&

C. Wilson Anderson, Jr., M.A.T. – Prior Lake, MN

Case study of a Dyslexic



- Male college student
- 21 years old
- 3.8 GPA in Electrical Engineering
- 145 Full Scale IQ
- Excellent social and conversational skills
- Dresses and acts age appropriate
- Mildly depressed (Dx: Dysthymic Disorder)
- Severe Reading Disorder/Dyslexia

Case study of a Dyslexic

- “I don’t recognize my own face!”
- **Developmental Prosopagnosia**



Problems Remembering Faces



- **Prosopagnosia**: Inability to recognize faces, even one's own face" (p. 1168).

Taber's (1981). Taber's Cyclopedic Medical Dictionary. Philadelphia, PA:F.A. Davis

- **Joaachim Bodamer, M.D. 1947**: German soldiers with brain injuries who could no longer see faces. Coined term.

"Prosopon" meaning face + "agnosia" meaning nonrecognition from Greek.

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, 18 (4), 68-73.

Subtypes of Prosopagnosia



- **Acquired Prosopagnosia:** Caused by insult to the brain; what Bodamer wrote about in 1947.
- **Developmental Prosopagnosia:** "...characterized by severely impaired face recognition. Individuals with this disorder, which runs in families, have no history of brain damage and intact early visual systems" (p. 166).

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, 18 (4), 68-73.

Duchaine, B.C., and Nakayama, K. (2006). Developmental Prosopagnosia: A Window to Content –Specific Face Processing. Current Opinion in Neurobiology, 16, 166-173.

Developmental Prosopagnosia



“Developmental prosopagnosics (DPs) have not suffered any obvious brain damage, yet they have deficits in face recognition that can be as severe and as selective as those seen in acquired prosopagnosics” (P. 166).

Duchaine, B.C., and Nakayama, K. (2006). Developmental Prosopagnosia: A Window to Content –Specific Face Processing. Current Opinion in Neurobiology, 16, 166-173.

Subtypes of Prosopagnosia



- Possible Associated Conditions:
 - Problems with recognition of facial expression of emotion
 - Problems with gender of face discrimination
 - Problems with age of face discrimination
 - Problems with **TOPOGRAPHAGNOSIA**: difficulty with personal navigation; getting lost easily
 - Asperger's Disorder

Galaburda, A.M., and Duchaine, B.C. (2003). Developmental Disorders of Vision. Neurologic Clinics, 21 (3), 687-707.

Subtypes of Prosopagnosia



- Possible Associated Conditions:
 - Central Auditory Processing Disorder (CAPD):
“The inability to understand spoken language in a meaningful way in the absence of what is commonly considered a hearing loss” (Sineps and Hunter, 1997).

Duchaine, B.C. (2000). Developmental Prosopagnosia with Normal Configural Processing. Cognitive Neuroscience and Neuropsychology. 11 (1), 79-82.

Choisser, B. (August, 14, 2007). Face Blind! From website: www.choisser.com/faceblind/about.html, p. 7 of 10.

Sineps, D., and Hunter, L. (1997). I Can Hear But...When Auditory Perception and Listening Break Down: Implications For Language and Reading. Paper presented at the International Dyslexia Association Annual Conference, Minneapolis, MN, November 13, 1997, Session T-45.

Prosopagnosia



- Remembering Faces:
 - This is an important ability for survival.
 - It lets you know “friends and foes”.
 - It helps you maintain relationships.
 - It helps you remember the social status of others.

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

Developmental Prosopagnosia



- Affects 2 to 3 percent of the population
- That equates to 6,000,000 Americans!
- Those affected often know something is wrong, but they don't know exactly what.

Goldberg, C. (June 14, 2006). When Faces Have No Name. The Boston Globe. From website:

www.boston.com/yourlife/health/diseases/articles/2006/06/14/when_faces_have_no_name/

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, 18 (4), 68-73.

Symptoms of Prosopagnosia



- Extreme difficulty recognizing faces. Even with a person who is well known by the sufferer (i.e., a parent, spouse, best friend, etc.).
- Appears aloof/arrogant, does not respond to people they “know” when they see them.
- Often complain they cannot follow movies or TV shows because they cannot remember the identity of characters.
- They tend to recognize people by hair, gait, clothing, voice, context, or other information.

Author (August 14, 2007). www.faceblind.org/research, p. 1 of 3.

Additional Symptoms of Prosopagnosia found in children



- It may take them months to recognize their classmates.
- School transition may be a problem.
- Extreme separation anxiety and stranger wariness
- Changes in peoples' appearance (i.e., new glasses, new hair style, etc.) may be a problem.
- Feelings of frustration, isolation and embarrassment

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, 18 (4), 68-73.

Developmental Prosopagnosia



- “The hereditary type of prosopagnosia has an autosomal dominant type of inheritance. This means that men and women are affected in equal numbers. In our experience women are more willing to talk about their face recognition problems, though.” (Thomas Grueter, M.D.)
- If one parent has Prosopagnosia their child has a 50% of having it.

Grueter, T. (August 14, 2007). Personal Communication.

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, 18 (4), 68-73.

Kennerknerht, I., Grueter, T., Wellinh, B, Wentzek, S, Horst, J., Edwards, S, and Gueter, M. (June, 2006). First Report of Prevalence of Non-Syndromic Hereditary Prosopagnosia. American Journal of Medical Genetics, Part A, 140A (15), Pages 1617-1622 (From abstract).

Whose at Risk f or Prosopagnosia?



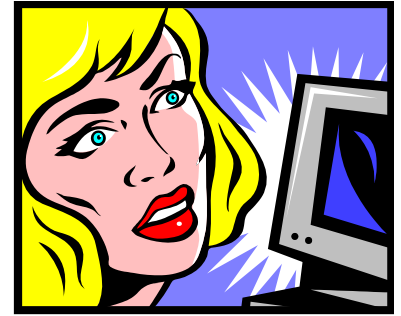
- Remembering Faces:
 - LD and AD/HD people often have problems remembering faces.

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

- Those with Asperger's Disorder are at risk for not remembering faces.

Attwood, T. (2007). The Complete Guide to Asperger's Syndrome. Philadelphia, PA: Jessica Kingsley, p. 130.

Prosopagnosia and NVLD *(Nonverbal Learning Disorders)*



“Hence, it appears that children with NLD have a specific deficit on immediate memory for faces. This facial memory deficit may be linked to a deficit in right hemisphere functioning which has already been implicated in facial processing and may also be linked with other disorders (e.g., autism spectrum disorder) in which similar facial processing deficits have been documented” (p. 1-2).

Liddell, G.A., and Rasmussen, C. (August, 2005). Memory Profile of Children with Nonverbal Learning Disability. Learning Disabilities Research and Practice, 20 (3), 137-141 (From abstract).

Prosopagnosia and Autism Spectrum Disorders



“Although not part of current diagnostic criteria, much evidence suggests that persons with ASD have marked deficits in face perception” (p. 127).

Schultz, R.T. (2005). Developmental Deficits in Social Perception in Autism: The Role of the Amygdala and Fusiform Face Area. International Journal of Developmental Neuroscience, 23, 125-141.

Treatment of Prosopagnosia



- “Prosopagnosics cannot be cured, but they can and do learn ways to recognize people” (p. 70).

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, 18 (4), 68-73.

Treatment of Prosopagnosia



“A treatment programme on training in perception, and analysis of facial features and familiar-face naming was conducted. Treatment resulted in excellent face naming for familiar faces, a decreases reliance on nonfacial cues and a reduction in AL’s tendency to misidentify unfamiliar faces as family members” (p. 1 of 2).

Brunsdon, R., Coltheart, M. Nickels, L., and Jay, P. (September 2006). Developmental Prosopagnosia: A Case Analysis and Treatment Study. Cognitive Neuropsychology. 23 (6), 822-840 (From abstract).

Treatment of Prosopagnosia: "Are you my Mother?"

- Encourage the person to look at people's faces when socializing.
- Introduce new people slowly and emphasize their characteristics: "Say hi to Billy with the red hair and freckles."
- Have children meet teachers long before school starts and have the child meet with them often.
- Have teachers keep their appearance "stable".
- Play introduction games.
- Post photos of teachers, friends, parents on wall.

Grueter, T. (August/September, 2007). Forgetting Faces. Scientific American: Mind, 18 (4), 68-73.

Prosopagnosia of Facial Expressions



Prosopagnosia of Facial Expressions



“Face perception can be subdivided into two general types – recognition of person identity via the structures of the face, and recognition of internal affective state of the shape of individual features and changes in their relative distance from one another during the expression” (p. 128).

Schultz, R.T. (2005). Developmental Deficits in Social Perception in Autism: The Role of the Amygdala and Fusiform Face Area. International Journal of Developmental Neuroscience, 23, 125-141.

Facial Expressions

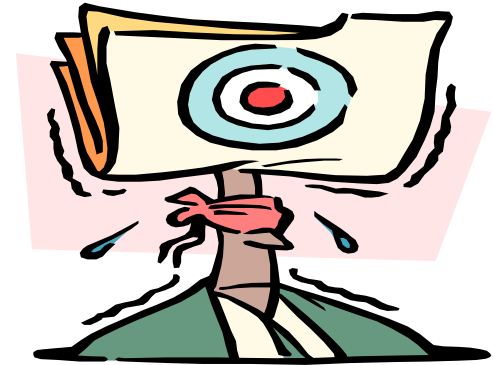


- Remembering Expressions:
 - The non-disabled are “pre-wired” to find the human face and voice the most important stimuli in the world.
 - Those with Autism cannot generalize what they learn (imitation/mimic). They copy behavior.
 - Those with Asperger’s Disorder (AD) don’t look at the eyes they look at the mouth. Differentiated those with AD from non-disabled 100% of the time.

Klin, A. (October 11-12, 2001). Autism, Asperger’s and the PDD Spectrum. Seminar presented at the 33rd Annual Arizona Association of School Psychologists Conference, Mesa, AZ.

Volkmar, F.(April 23, 2003). Asperger Syndrome: Clinical Features, Assessment, and Intervention Guidelines. Seminar presented by New England Educational Institute, Phoenix, AZ

Decoding Skill and Facial Expression



- Most and Greenbank (2000) stated LD children are less accurate in identifying emotional expressions than non-LD children.
- Brown (2001) indicated AD/HD children are less accurate in facial expression identification than their non-AD/HD peers.
- Attwood (2007) stated those with Asperger's Disorder have great difficulty decoding faces.

Most, T., and Greenbank, A. (2000). Auditory, Visual, and Auditory—Visual Perception of Emotions by Adolescents With and Without Learning Disabilities, and their Relationship to Social Skills. Journal of Learning Disabilities, 15 (4), pp. 171-178.

Brown, T. E. (2001). Social Ineptness & “Emotional Intelligence” in ADHD. Paper Presented at the 13th Annual Children and Adults With Attention Deficit Disorders International Conference, October 18-20 2001, Anaheim CA.

Attwood, T. (2007). The Complete Guide to Asperger's Syndrome. Philadelphia, PA: Jessica Kingsley, p. 130.

Problems Making the Appropriate Facial Expression to Match How One Feels and What is Appropriate to The Situation

- Unmedicated AD/HD, Combined Type people have difficulty making facial expressions to match how they feel. They tend to “over-emote” their facial expressions. See slides 66-70 (Kuehle, et.al., 2002).
- Attwood’s (2007) story of the boy with Asperger’s Disorder who saw his mother crying and asked, “**What face do I make?**” (p. 134).

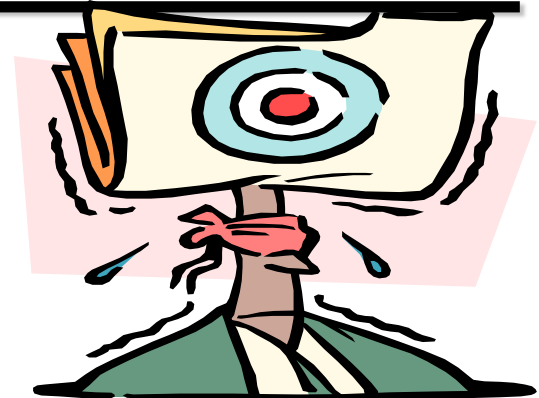
Kuehle, H.J., Hoch, C, and Jansen, F. (2002). Video Assisted Observation of Visual Attention, Facial Expression of the Individual Stimulant Dosage and Motor Behavior for the Diagnosis and for the Determination in Children with AD/HD. Obtained from: Kuehle, H. (October 17, 2002). Video Assisted Observation of Visual Attention and Motor Behavior for the Diagnosis and Determination of the Individual Stimulant Dosage in Children with AD/HD. Research Poster Session, 14th Annual CHADD International Conference, Miami Beach, FL.

Attwood, T. (2007). The Complete Guide to Asperger’s Syndrome. Philadelphia, PA: Jessica Kingsley, p. 135.

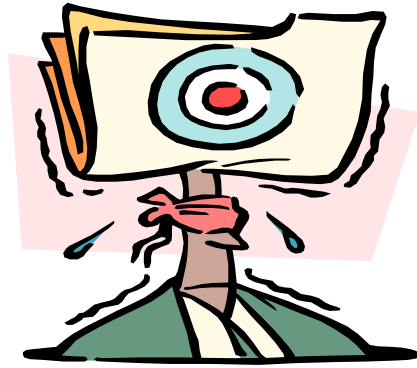
Treating Problems Reading Facial Expressions

- Volkmar, F. (April 23, 2003). Asperger Syndrome: Clinical Features, Assessment, and Intervention Guidelines. Seminar presented by the New England Educational Institute, Phoenix, AZ.
- Gauthier, I. And Tarr, M.J. (1997). Becoming a “Greeble” Expert: Exploring Mechanisms for Face Recognition. Vision Research, 37 (12), 1673-1682.

• **FACIAL EXPRESSIONS CAN
BE TAUGHT!**



Treating Problems Making & Reading Facial Expressions



- “Gaining Face” computer program (www.ccoder.com/GainingFace/)
- Ekman CD-ROMs (www.paulekman.com)
- Baron-Cohen: “Mind Reading – An Interactive Guide to Human Emotions (CD-ROM)”; www.human-emotions.com/mindreading/default.asp
- Cognitive Affective Training-Faces and Feeling Words: www.CAT-kit.com
- Student Handout: Emotions and Facial Expressions – From: McAfee, J. (2002). Navigating the Social World. Arlington, TX: Future Horizons, pp 83-84.

Emotional Seeing Eye Dogs

- Dogs separated from wolves about 135,000 years ago.
- Dogs lived with humans 100,000; even before we were “modern humans” (Homo Habilis).
- Dog and humans co-evolved.
- Humans learned to think and act like dogs.
- Dogs allowed humans to hunt big game while they acted as guards and lookouts. Humans did more planning and organization activities.
- 14,000 years ago humans domesticated dogs.
- Homo Sapien Neantathalensis did not have dogs; hence they are extinct.
- In the past 100,000 years dogs brains shrunk by 10 to 30%; mostly in their forebrains. Humans’ brains shrank by 10%; mostly in the midbrain sensory and smell areas.
- Dogs have a symbiotic relationship with humans and have a genetic predisposition to understand human emotions.

Grandin, T. (2005). Animals in Translation. New York, NY: Simon & Schuster.

Emotional Seeing Eye Dogs



- 4Paws For Ability
253 Dayton Avenue
Xenia, OH 45385
- Training Center:
937-374-0385
- E-mail:
karen4paws@aol.com

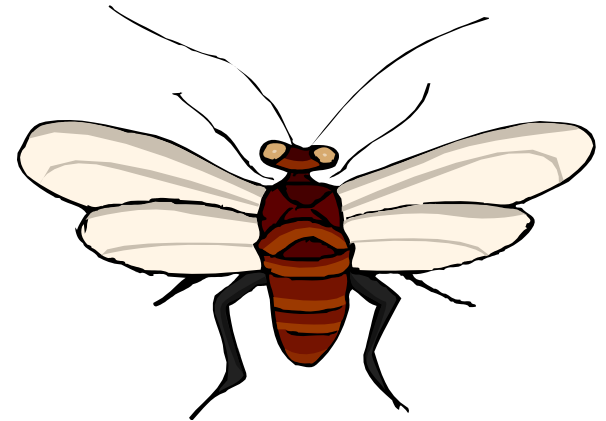
*Alternative and Integrative Medicine
Treatments for LD, AD/HD, NVLD and
Asperger's Disorder*



Alternative and Integrative Medicine Treatments of AD/HD & LD

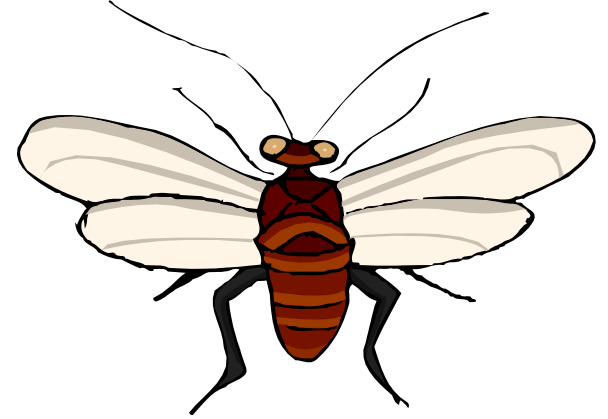
“We should all eat dung, because a thousand flies can’t be wrong!”

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



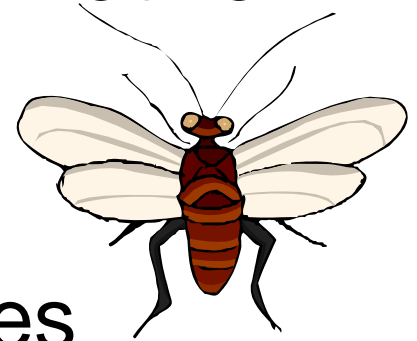
When to question if a treatment is legitimate:

- 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.

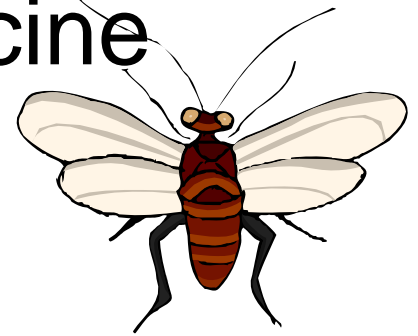
Alternative and Integrative Medicine Treatments of AD/HD & LD

- 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

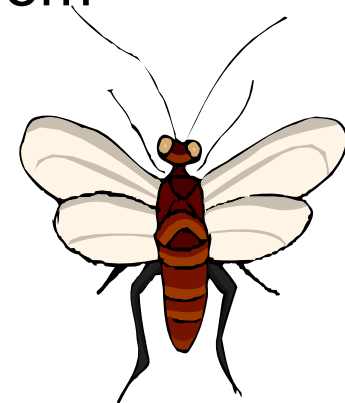


- “Today’s complementary and alternative medicine is tomorrow’s mainstream, but first it must meet with rigorous scientific evaluation.”
- –Alan Leshner, Ph.D., National Advisory Council for Complementary and Alternative Medicine and CEO of the American Association for the Advancement of Science (p.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

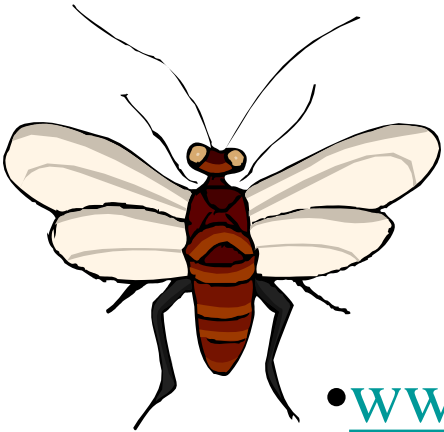
Dittmann, M. (June, 2004). Alternative Health Care Gains Steam. Monitor On Psychology, 35 (6), pp. 44.

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.



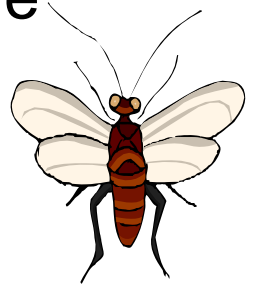
Places to Check Out “New” Treatments for AD/HD and LD



- 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
- Arnold, E. (August, 2006). Alternative and Complementary Treatments for AD/HD. Attention!, 13 (4), 30-35

Places To Check Out “New” Treatments For AD/HD and LD: National Institute of Health (NIH)

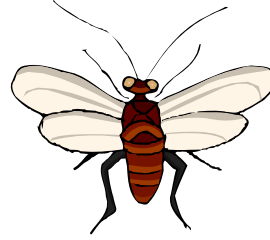
- National Center for Complimentary and Alternative Medicine: www.nccam.nih.gov
- NCCAM Clearinghouse: 888-644-6226
- Some findings:
 - St. John’s Wort (*Hypericum Perforatum*) no better than placebo with Major Depression. Now being studied with “Minor” Depression-There is some research that St. John’s Wort can help with mild to moderate depression.
More research is needed!



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

Autor (March 2004). Get the Facts: St. John’s Wort and The Treatment of Depression. National Center for Complementary and Alternative Medicine, National Institutes of Health, NCCAM Publication #: D005: www.nccam.nih.gov/health/stjohnswort/

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.
- Office of Dietary Supplements (ODS), National Institutes of Health: www.ods.nih.gov
- CAM on PubMed-National Library of Medicine: www.nlm.nih.gov/nccam/comon/pubmed.html

PLACE TO CHECK OUT CAM THERAPIES

Ingersoll, B. (October 26, 2006).
Complementary Treatments for
AD/HD. Paper Presented at the 18th
Annual CHADD International
Conference, Chicago, IL.

