

# Possible Biomarker for Autism

- **Roberts, T.P., Khan, S.Y, Monroe, J.F., Cannon, K., Blaskey, L., Woldoff, S., Qasmieh, S., Gandal, M., Schmidt, G.L., Zarnow, D.M., Levy, S.E., and Edgar, J.C. (February, 2010). MEG Detection of Delayed Auditory Evoked Responses in Autism Spectrum Disorders: Towards an Imaging Biomarker for Autism. Autism Research, 3 (1), 8-18.**
- **Roberts, T.P.L., Schmidt, G.L., Egeth, M., Blaskey, L., Rey, M., Edgar, C., and Levy, S.E. (May, 2008). Electrophysiological Signatures: Magnetoencephalographic Studies of the Neural Correlates of Language Impairment in Autism Spectrum Disorders. International Journal of Psychophysiology, 68 (2), 149-160.**

# Possible Biomarker for Autism

**Bosl, W., Tierney, A., Tager-Flusberg, H. and Nelson, C. (2011). EEG Complexity as a Biomarker for Autism Spectrum Disorder Risk. BMC Medicine, 9 (18): <http://www.biomedcentral.com/1741-7015/9/18>**

# Isolation and The Immune System

- **Lonely people have more active genes that promote inflammation and less active genes that inhibit inflammation.**
  - This puts them at risk for some cancers, degenerative neurological disorders and cardiovascular problems.
- **Lonely people's immune systems are geared toward fighting bacteria not viruses.**
- **Sociable people have immune systems geared toward viruses.**

# Isolation and The Immune System

- Azar, B. (May, 2011). The Psychology of Cells. Monitor On Psychology, 42 (5), 32-35.
- Miller, G., Chen, E., and Cole, S. (January, 2009). Health Psychology: Developing Biologically Plausible Models Linking the Social World and Physical Health. Annual Review of Psychology, 60, 501-524.
- Cole, S.W., Hawkley, L.C., Arevalo, J.M., Sung, C.Y., Rose, R.M., and Cacioppo, J.T. (2007). Social Regulation of Gene Expression in Human Leukocytes. Genome Biology, 8 (9), doi:10.1186/gb-2007-8-9-r189.
- Cole, S.W., Hawkley, L.C., Arevalo, J.M.G., and Cacioppo, J.T. (February 15, 2011). Transcript Origin Analysis Identifies Antigen-Presenting Cells as Primary Targets of Socially Regulated Gene Expression In Leukocytes. Proceedings of the National Academy of Sciences of the United States of America (PNAS), 108 (7), 3080-3085.

# 25% or Americans Socially Isolated

- From 1985 to 2005 the typical American said the average number of people they could rely upon to help them with a significant concern dropped from 3 to 2.
- In 2005 twenty-five percent reported they had no trusted friend they could rely upon which is double the rate of 1985.

McPherson, M., Smith-Lovin, L., and Brashears, M.E. (2006). Social Isolation in America: Changes in Core Discussion Networks Over Two Decades. American Sociological Review, 71 , 353-375.

# Multisensory Processing in ASD

- Found that ASD children did not integrate multisensory (auditory-somatosensory) stimuli as well as non-disabled children.
- Will next investigate Sensory Integration Training for efficacy given these results.
- Molholm stated ASD children have difficulty simultaneously processing faces and voices.

Russo, N., Foxe, J.J., Brandwein, A.B., Gomes, T., Altschuler, H., Molholm, S. (October, 2010). Multisensory Processing with Autism: High-Density Electrical Mapping Auditory-Somatosensory Integration. *Autism Research*, 3 (5), 253-267.

Hamilton, J. (June 2, 2011). Looking for Early Signs Of Autism In Brain Waves. Washington, DC: National Public Radio: <http://www.npr.org/2011/06/02/136882002/looking-for-early-signs-of-autism-in-brain-waves>

# One Year Medication Follow-Up Study of Adults with ADHD

- **116 adults with ADHD**
- **Double-blind crossover trial of methylphenidate and placebo**
- **Responders put on a one year open-label trial of methylphenidate**
- **50% decline in symptoms and severity. General Adaptive Functioning (GAF) improved significantly.**
- **“ADHD adults, who responded to methylphenidate in the short-term, placebo-controlled trial, responded to long-term treatment with marked improvements in ADHD symptoms and psychosocial functioning.” (p. 36)**

Wender, P.H., Riemherr, F.W., et al. (January, 2011). A One Year Trial of Methylphenidate in the Treatment of ADHD. Journal of Attention Disorders, 15 (1), 36-45.

# Manual Corrections





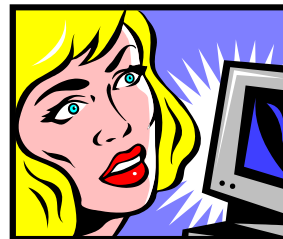
# How to Assess Developmental Prosopagnosia



- Cambridge Face Memory Test
- Test My Face Recognition- Internet test

Duchaine, B. and Nakayama, K. (2006). The Cambridge Face Memory Test: Results for Neurologically Intact and an Investigation of It's Validity Using Inverted Face Stimuli and Prosopagnosic Participants. Neuropsychologia, 44, 576-585. From web site:

[www.faceblind.org/social\\_perception/papers/duchaine06neuropsychologia](http://www.faceblind.org/social_perception/papers/duchaine06neuropsychologia)



Test My Face Recognition (From web site): [www.faceblind.org/facetests/index.php](http://www.faceblind.org/facetests/index.php).

# Computer Programs to Treat Prosopagnosia

- “Gaining Face”: [www.StoneMountainSoftware.com](http://www.StoneMountainSoftware.com)
- Paul Ekman, Ph.D. (“**Lie to Me**”/SPOT – Surveying Passengers by Observational Techniques) CD ROMS:  
Micro Expression Training Tool (METT)  
Subtle Expression Training Tool (SETT)  
Repeated presentations of METT & SETT to those with Autism Spectrum Disorders  
Available from: [www.paulekman.com](http://www.paulekman.com)



# Americans with Disabilities Act, Amendments Act of 2008

- Was enacted on September 25, 2008
- Became effective on January 1, 2009
- It redefined the term “disability” under ADA
- It directed the U.S. Equal Employment Opportunity Commission (EEOC) to amend its ADA regulations to reflect the ADAAA.
- The final regulations were approved by congress on March 25, 2011

# Americans with Disabilities Act, Amendments Act of 2008

- Congress made it easier for a person to seek protection under the ADA if they have a disability-The term disability is now interpreted more broadly.
- The term “substantially limits” now requires a lower degree of functional limitations than has been applied in the courts.
- “Substantially limits” is now to be considered more broadly.

# Americans with Disabilities Act, Amendments Act of 2008

- One still needs an “individualized assessment” to determine an impairment in a major life activity.
- “Mitigating measures” like medication for ADHD no longer can be used to determine level of impairment (glasses and contacts excluded).
- An impairment that is episodic or in remission is still considered a disability.
- Determination of disability should not require extensive analysis.

# Americans with Disabilities Act, Amendments Act of 2008

- Reading, standing, communicating, bowel movements, autoimmune functions, etc. are now considered “major life activities.”

From:

Fact Sheet on the EEOC’s Final Regulations  
Implementing the ADA AAA:

[www1.eeoc.gov//laws/regulations/adaaaa\\_fact\\_sheet.cfm?renderforprint=1](http://www1.eeoc.gov//laws/regulations/adaaaa_fact_sheet.cfm?renderforprint=1)

# Books On Bonobos & Chimpanzees

**De Wall, F., and Lanting, F. (1997). Bonobo: The Forgotten Ape. Berkley, CA: University of California Press.**

**Van Lawick-Goodall, J. (1971). In The Shadow of Man. Boston, MA: Delta Books.**