

# Bright kids struggle with reading and learning due to undiagnosed vision problems.

... We can help.



## FACT SHEET ON CONVERGENCE INSUFFICIENCY (CI)

**FACT: A PERSON CAN HAVE 20/20 EYESIGHT, AN IQ OF 130, AND STILL HAVE NO READING COMPREHENSION.**

### EVIDENCE

- 1.) "Accurate accommodation (the involuntary change in shape of the lens to focus images at varying distances onto the retina) is essential for seeing a clear image of the world, and accurate **convergence** of images from the two eyes is necessary for clear binocular vision. Errors in either of these control loops can destroy clear vision, making *acquisition of information from the printed page impossible*".
- 2.) "The results (of the study \*) support the proposition that the *application of orthoptics (vision therapy) to all learning/reading disabled or deficient children who manifest **convergence insufficiency (CI)** should be the first line of therapy*. If reading ability does not improve significantly within four to six months, other interventions should then be instituted."
- 3.) "Symptoms shared by **convergence insufficiency (CI)** and convergence excess include eyestrain, headaches, blurred vision, double vision, sleepiness, and (if reading) *trouble remembering what was read*. Additional symptoms associated with convergence insufficiency alone include a pulling sensation around the eyes, the rubbing or closing of an eye, words seeming to jump or float across the page, the need to re-read the same line of words, frequent loss of place, general ability to concentrate, and short attention span."
- 4.) "**Convergence insufficiency (CI)** is a prevalent and distinct disorder. Typical symptoms include double vision, eyestrain, headaches, and blurred vision while reading. It affects approximately 5% of children in the United States, and may have a serious impact on an individual's *performance in school*, choice of jobs, and quality of life."
- 5.) "One out of every four school age children will have a vision problem which could interfere with the ability to learn."
- 6.) "Symptoms of CI include loss of place, loss of concentration, reading slowly, eyestrain, headaches, blurry vision, and double vision."
- 7.) Mayo Clinic researchers state: "Children with CI tend to have blurred or double vision or headaches and corresponding issues in reading and concentrating which ultimately impact learning."

### REFERENCES:

- 1.) **LEARNING DISABILITIES; A REPORT TO THE U.S. CONGRESS** Prepared by the Interagency Committee on Learning Disabilities 1987 Chapter III.B. **National Eye Institute, National Institutes of Health** Page 35.
- 2.) Letter from Firmon E. Hardenbergh, M.D.,F.A.C.S. Chief of Ophthalmology and Ophthalmologist to the **Harvard University Health Services**, Harvard University. (study\* was in the Binocular Vision and Eye Muscle Surgery Quarterly Spring 1993 Volume 8 Number 3. pages 91-106: *A randomized Prospective Masked and Matched Comparative Study of Orthoptic Treatment Versus Conventional Reading Tutoring of Learning Disabilities in 62 Children*. By; D. Atzmon, CO, P. Nemet, MD, A. Ashay, PhD, and Kami, MA.)
- 3.) MEDICAL EDGE from **Mayo Clinic**. ([www.medicaledge.org](http://www.medicaledge.org)) **VISION THERAPY TREATMENT FOR BINOCULAR DISORDERS** 10/08/06
- 4.) **National Eye Institute, National Institutes of Health**. Convergence Insufficiency Treatment Trial (CITT) July 2005
- 5.) **College of Optometrists in Vision Development** website ([www.covd.org](http://www.covd.org)) **Vision Quiz**
- 6.) **National Eye Institute, NIH** press release of 2008 CITT on October 13, 2008
- 7.) **Mayo Clinic Newswise** press release of 2008 CITT on October 13, 2008

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