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## **Irlen Syndrome: Learning and Light Sensitivity**

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In 1982, Helen Irlen, an educational psychologist, discovered a specific set of symptoms existing in her students which she named Scotopic Sensitivity (IS) Syndrome. In recent years, the Medical Council in England renamed it Irlen Syndrome. IS is a perceptual problem that interferes with reading and learning. It affects an estimated 10% to 12% of the **general population**, including **regular education** students and approximately 45% of **Special Education students**.

Even **academically gifted students** can have Irlen Syndrome and have to put a good deal of extra effort and extra energy into the reading process despite getting good grades and being good readers. Several major characteristics of Irlen Syndrome are light sensitivity, especially to fluorescent lighting, Irlen related print distortions, visual-perceptual processing difficulties and sometimes headaches or migraines.

For adults, who experience headaches, migraines or reading inefficiency in the workplace, this method can improve job performance, decrease or stop headaches or migraines and improve other issues, while improving their functioning and quality of life.

Special Education (SPED) students, as well as those who have reading or learning disorders, headaches, ADD/HD, dyslexia, autism, Asperger's and some individuals with mild Traumatic Brain Injury (TBI), often have Irlen Syndrome as a coexisting layer. The syndrome further inhibits skill development and it may in part explain why repeated remediation efforts seem less effective with special needs populations. In fact, Irlen Syndrome symptoms must be dealt with before most students can adequately strengthen their basic skills including encoding, decoding, sight vocabulary, comprehension, accuracy, fluency and reading rate. The Irlen Intervention will help to shorten remediation time, ensure improvements on standardized test scores, including the MCAS, and help students achieve higher grades on report cards.

Irlen Syndrome is a perception problem, not a problem with vision or the eyes. Since it is neurologically based, researchers, such as Dr. Daniel Amen, MD and Dr. Jeffery LeWine, using MEG brain scans, report that it affects the timing in which the brain is processing information. Colored light filters seem to improve that faulty timing. When the timing is flawed the individual reports specific complaints which may include light sensitivity, optical illusions of the print or page, headaches, etc. Thus, when the timing is improved or corrected, with the use of colored light filters, the complaints are either minimized or eliminated. It is not detected in a routine eye exam nor is it diagnosed using standard educational, psycho-educational or speech and language testing. James Irvine, of the United States government, Naval Air Warfare Center, developed a Brief on the Causes of Irlen Syndrome. For a copy to be sent via email, contact [irlenboston@aol.com](mailto:irlenboston@aol.com).

Fortunately, Irlen Syndrome is very easy to identify and treat using specific colored overlays. Teachers, special educators, therapists, private practitioners, occupational therapists, speech and language specialists, school nurses and others can be trained to do the one hour screening and give the appropriate overlays to school children and to adults.

Overlays can be used over reading material and tests. Several minor environmental modifications will also help, such as using a visor/dark baseball cap, colored paper for handouts and written work, moving closer to natural light source and lessening or turning off the fluorescent lighting. Research has shown that the use of overlays and or lenses can return a percentage of special education students to regular education status. Wearing Irlen filters in eyeglasses is another way to greatly increase reading efficiency and skills.

Once individuals have been diagnosed with Irlen Syndrome, and are successfully using colored overlays, they will generally experience improved self-esteem, self-confidence, and self worth and it can reenergize their will to learn. Individuals realize that there was a reason they struggled with reading and may now think *"You mean it isn't my fault? or "You mean I'm not lazy, or dumb or stupid?"*. It is a problem that has a simple solution for most people who have it. The Irlen Method will make doing homework easier and lessen the struggle at home for both the child and parent. Further, teachers will be more successful in making remedial progress with students because the printed word can be perceived correctly rather than with the distortions that are the earmarks of Irlen Syndrome.

**Reading Characteristics** may include reading one word at a time, slow or choppy reading rate, problems with tracking, poor comprehension, skips words or lines, needs frequent breaks, loses place, avoids reading, prefers to read in dim lighting, misreads words, misses small words and substitutes words. **Complaints while reading** include strain or fatigue, sleepy or tired, headaches and migraines, dizzy or nausea, fidgety or restless. **Non-verbal behaviors** sometimes include rubbing eyes or face, squinting, adjusting the book or moving closer or further away, placing the book in the lap and/or under the desk to shade it, or holding hands over the eyes like a visor. **Attention behaviors** include problems concentrating with reading or writing, easily distracted when reading or listening, daydreaming, problem staying on or starting tasks. **Optical illusions** of the text for some may include movement, blurring, doubling, shadows, halos, or river like patterns in the white spaces.

**House Bill and Senate bills** on Irlen Syndrome have been pending in the state legislature for several years. Its principal sponsor has been Senator Michael Rodrigues and this year he is joined by 32 other legislators including Representatives and Senators, including Senator Stanley Rosenberg.

**Saving resources is crucial.** In testimony presented to the Committee on Education this past spring, it was reported that Massachusetts could save \$6,108 for every SPED student returned to regular education for each year that student is not in SPED. This represents the cost difference between educating regular education (\$6,765) and special education (\$13,471) students. With more than 150,000 special education students, Massachusetts could save approximately six million dollars over a three to five year period by training 100 teachers and giving them school time to screen 10 students each. (Most teachers screen students on their own time now.) The cost to train each teacher is roughly \$600 plus cost of overlays (about \$3.50 each) plus minimal administrative and start up costs. Another simple approach would be to train 10 regional screeners and have them go to various schools and screen the students to achieve an even greater impact.

**Massachusetts educators** have joined others around the United States to help students achieve greater success. Special Educator, Cindy Stone (now retired) mainstreamed 50% (16) of her 33 student case load. William Grayden, School Adjustment Counselor (now retired), had up to 50 students each year using overlays in classrooms and/or the MCAS.

Teacher, Mary Ann Grassia, screens students, provides overlays and like other teachers, also provides information to fellow teachers and school administrators at in-service workshops and presentations. Guidance Counselor Judy Raphael writes 504 accommodation plans which include the overlays. Of her students who failed the 10th grade **MCAS** and used the overlays for the retest, all improved their scores. In fact, all but one student passed using the overlays. The one who just missed passing, raised his English score by eight points. One student raised her English score by eight points and her math score by 10 points and passed both tests. Another student who had failed the 10th grade MCAS used her overlay for the math retest but not the English retest. She passed the math but failed the English test with the exact same score she received the year before. One student, who has not been using her overlay at all, dropped two points on the MCAS retest. She intends to use it for her next retest. One student who was repeating grade nine last year and was failing four out of five major subjects again, was screened just prior to midterms. Using her overlays, she got A's and B's on most mid term exams. She also received A's and B's on her third quarter grades from classes she had been failing, or close to failing, for the entire first semester of last year. This student is now in the 10th grade.

In collaboration with **Salem State College, Graduate School of Education** and **Irlen Center Boston**, a four day (or two day for less PDP's) Screener Training options are offered throughout the year at The Learning Tree. There is an additional option of earning three graduate credits. "*The Brain and Irlen Syndrome*" course has been offered in the past through both Salem State and Cambridge College, Applied Neuroscience Certificate program. **Georgianna Saba is a Registered Provider of PDP's with the Massachusetts Department of Education.**

Contact Georgianna Saba at [www.irlenboston@aol.com](mailto:www.irlenboston@aol.com) or 781-396-3321 for more training information or go to [irlenboston.com](http://irlenboston.com) for a free Irlen Syndrome Questionnaire and research references listing twenty three peer reviewed articles. A bibliography of more than one hundred and sixty papers and studies is also available there. Information about Helen Irlen can also be found at [www.irlen.com](http://www.irlen.com). Three "must read" books on this topic are: **Reading by the Colors** by Helen Irlen, **The Irlen Revolution** by Helen Irlen and **The Light Barrier** by Rhonda Stone, the parent of two children with Irlen Syndrome.

**NOTE:** Salem State College offers a 3 credit graduate course entitled: "***Irlen Syndrome and The Brain***" at ***The Learning Tree media center in Stoneham***. "*The Brain and Irlen Syndrome*" has also been offered in the past through Cambridge College. Professor *Georgianna Saba is the co-founder of The Applied Neuroscience Certificate Program.*

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