#### **GET EDUCATED!**

Last Wednesday Monthly 6:00 to 9:00 pm

#### **Irlen Awareness Program**

irlenvlcmd.com & irlensyndrome.org
Free Seminars, Screenings, CE Events!

**Registration Required for IrlenPASS @ AOTSS.com** 



### **Abilities OT**

irlen Visual Learning Center

Unlimited Possibilities With Neuroscience-Based Interventions & Professional Trainings

**Get IMMEDIATE, DRUG-FREE RELIEF** from symptoms of:

Light Sensitivity • Migraines/Headaches • Dyslexia Autism • Brain Injuries • ADD/HD • Anxieties • Lyme Disease

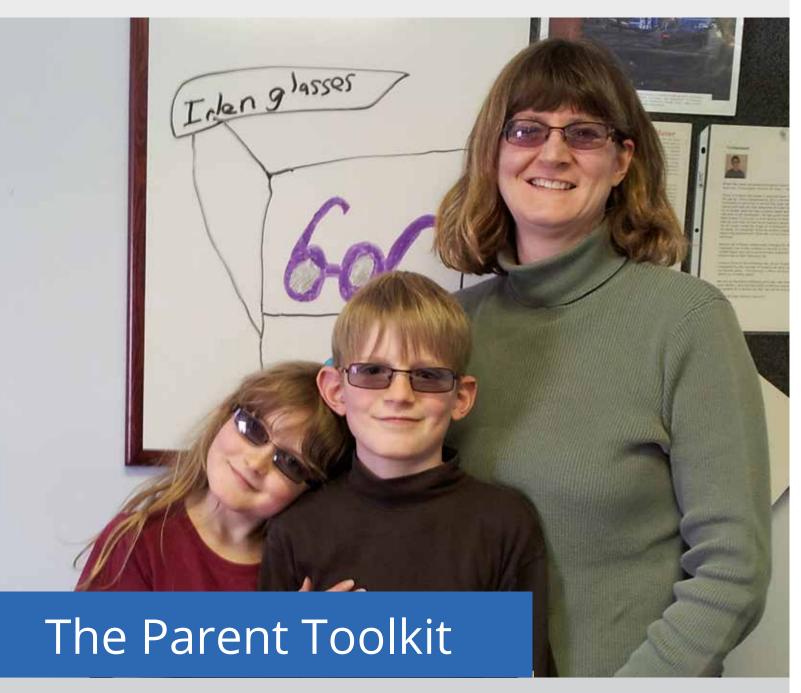
Featured on 60 Minutes, National Geographic, ABC News, Doctor's Show, Amen Clinics & Harvard Medical!

### Call us today for a FREE phone consultation!

Shoshana Shamberg, OTR/L, MS, FAOTA, Clinical Director Professional Development & Services for All Ages

AOTSS.com IrlenVLCMD.com 410.358.7269 shoshana@aotss.com





What Parents Need to Know About Irlen Syndrome



Shoshana Shamberg, OTR, MS, FAOTA
OT, Accessibility Consultant & Irlen Diagnostician
410.358.7259 | shoshana@aotss.com | aotss.com | irlenvicmd.com

www.irlensyndrome.org

### References

- 1. Loew, S.J., & Watson, K. (2012). A prospective genetic marker of the visual perception disorder Meares-Irlen syndrome. Perceptual and Motor Skills, 114(3), 870-882. 2. Robinson, G.L., Foreman, P.J., Dear, K.G.B., and Sparkes, D. (2004). The Family Incidence of a Visual-Perceptual Subtype of Dyslexia. Nova Science Publishers, 27-40.
- 3. Robinson, G.L., Roberts, T.K., McGregor, N.R., Dunstan, R.H., & Butt, H. (1999). Understanding the causal mechanisms of visual processing problems: a possible biochemical basis for Irlen Syndrome? Australian Journal of Learning Disabilities, 4(4), 21-29.
- 4. Chouinard, B.D., Zhou, C.I., Hrybousky, S., Kim, E.S., Cummine, J. (2012). A functional neuroimaging case study of Meares-Irlen syndrome/visual stress (MISViS). Brain Topography, 25(3):293-307.
- 5. Huang, J., Zong, X., Wilkins, A., Jenkins, B., Bozoki, A., Cao, Y. (2011). fMRI evidence that precision opthalmic tints reduce cortical hyperactivation in migraine. Cephalagia, 31(8):925-36.
- 6. Lewine, J.D., Davis, J., Provencal, S., Edgar, J., Orrison, W. (1997). A magnetoencephalographic investigation of visual information processing in Irlen's Scotopic Sensitivity Syndrome. Conducted at The Center for Advanced Medical Technologies, The University of Utah School of Medicine, Salt Lake City, Utah, and Department of Psychology, The University of New Mexico, Albuquerque, New Mexico.
- 7. Yellen, A. & Schweller, T. (2009). The Yellen-Schweller Effect: Visual Evoked Responses and Irlen Syndrome.
- 8. Noble, J., Orton, M., Irlen, S., Robinson, G. (2004). A controlled field study of the use of colored overlays on reading achievement. Australian Journal of Learning Disabilities, 9, 14-22.
- 9. Park, S.H., Kim, S., Cho, Y.A., Joo, C. (2012). The Effect of Colored Filters in Patients with Meares-Irlen Syndrome. J Korean Ophthalmol Soc., 53(3):452-459. Korean. Published online 2012 March 15. http://dx.doi. org/10.3341/jkos.2012.53.3.452
- 10. Robinson, G.L., & Foreman, P.J. (1999). Scotopic sensitivity/Irlen syndrome and the use of colored

- filters: A long-term placebo controlled study of reading strategies using analysis of miscue. Perceptual & Motor Skills, 88, 35-52.
- 11. Irlen, H., & Robinson, G.L. (1996). The effect of Irlen coloured filters on adult perception of workplace performance: a preliminary survey. Australian Journal of Remedial Education, 1, 7-17.
- 12. Robinson, G.L., & Conway, R.N.F. (2000). Irlen lenses and adults: a small scale study of reading speed, accuracy, comprehension and self-image. Australian Journal of Learning Disabilities, 5, 4-13.
- 13. Whiting, P., Robinson, G.L., & Parrot, C.F. (1994). Irlen colored filters for reading: a six year follow up. Australian Journal of Remedial Education, 26, 13-19. 14. Loew, S.J., Marsh, N.V. & Watson, K (2014). Symptoms of Meares-Irlen/Visual Stress Syndrome in subjects diagnosed with Chronic Fatigue Syndrome. International Journal of Clinical and Health Psychology, 14(2), 87-92.
- 15. Loew, S.J. & Watson, K. (2013). The prevalence of symptoms of scotopic sensitivity/Meares-Irlen syndrome in subjects diagnosed with ADHD: Does misdiagnosis play a significant role? Croatian Review of Rehabilitation Research, Vol.49. Supplement, str. 50-58.
- 16. Irlen, H. (2012). A sensory intervention for visual processing deficits using precision colored filters. Autism Science Digest: The Journal of AutismOne, 04, 94-102.

## Next Steps and Additional Resources

This toolkit is full of excellent information to help you better understand and assist your Irlen child, but we know you may still have questions or need additional information. This checklist of next steps and additional resources will help you move forward on your Irlen journey.



VISIT www.irlen.com to take a self-test to determine if your child is at-risk for Irlen Syndrome or to find a certified Irlen Screener or Diagnostician to formally identify Irlen Syndrome



**Share** the Presentation for Kids and Classrooms to explain Irlen Syndrome to your child's class, teacher, or school to generate greater understanding and support in the school environment

(available at www.irlensyndrome.org/BecomeAnAdvocate)



Connect with other Irlen parents and children via Facebook in any of the following Facebook Groups: Irlen Institute, Irlen Awareness Week, Irlen Syndrome Support – Reading By Color Charity, Irlen Support Group Channel Islands, Kids With Irlen Syndrome



Advocate for change at the local, state, and national level to ensure students with Irlen Syndrome don't fall through the cracks



#### For more information:

- Information about Irlen Syndrome: www.irlensyndrome.org
- Information about Irlen Solutions: www.irlen.com
- Books by Helen Irlen available from Amazon.com and BarnesandNoble.com: *Reading By The Colors, The Irlen Revolution, Sports Concussion and Getting Back in the Game of Life*

### **Table of Contents**

4	How to use this toolkit
5	What is Irlen Syndrome?
6	Case study
7	What causes symptoms?
8	How common is it?
9	ls your child at risk?
10	Home modifications
12	How to help your child at school
13	olutions: Irlen Colored Overlays and Spectral Filters
14	Frequently Asked Questions
16	search to support the use of Irlen Colored Overlays and Spectral Filters
17	Next Steps
18	References

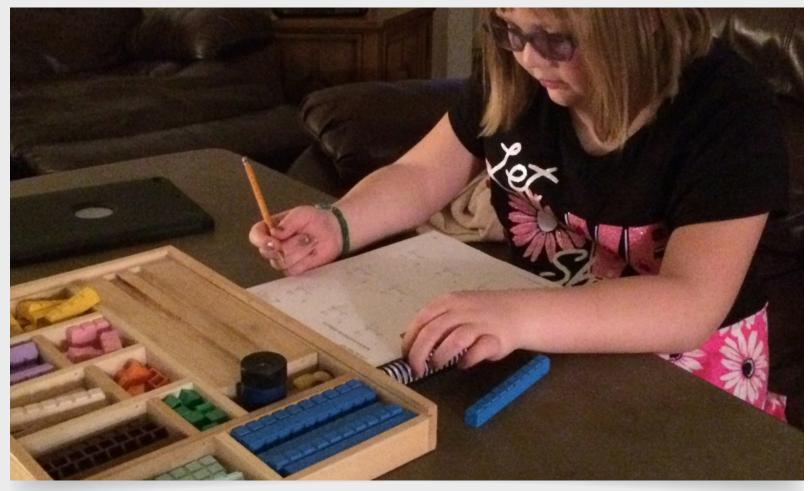
www.irlensyndrome.org 17 www.irlensyndrome.org 2

Re

## About the Irlen Syndrome Foundation

The Irlen Syndrome Foundation seeks to increase proper identification of Irlen Syndrome and access to Irlen solutions (Irlen Colored Overlays and Irlen Spectral Filters). We educate the public and professionals about Irlen Syndrome, and we offer grants and aid to ensure that research-based Irlen solutions are available to children who need them most.





## Research To Support the Use of Irlen Colored Overlays and Spectral Filters

The Irlen Method and the efficacy of colored overlays and colored filters has been the subject of over 200 research studies in education, psychology, and medicine.

This research has established a hereditary component of the disorder<sup>1-2</sup>, a number of biochemical markers for problems associated with Irlen Syndrome<sup>3</sup>, and differences between both the anatomy and functioning of brains of individuals with Irlen Syndrome<sup>4-7</sup>. The research has repeatedly documented improvements in a variety of reading skills, reduction in physical symptoms, and improved functioning and success in

both academia and the workplace<sup>8-13</sup>. Research on Irlen Syndrome has also documented co-morbidity with a variety of other disorders, including chronic fatigue syndrome<sup>14</sup>, ADHD<sup>15</sup>, and autism<sup>16</sup>. A review of 62 studies published in peer-reviewed journals found 56 studies with positive findings, 45 with positive results for particular reading skills, and 11 showing improvements in accommodation facility, eye movements while reading, and reduced headaches/migraine.

More research and links to full articles are available at www.irlensyndrome.org.

# Are colored or tinted glasses prescribed by optometrists the same thing as Irlen Spectral Filters?

Colored lenses provided by optometrists and vision specialists to treat reading problems are not the same as the Irlen Method. These professionals do not have access to the wide variety of Irlen colors and densities and do not conduct the in-depth validated diagnostic process for color selection developed by Helen Irlen to address Irlen Syndrome. There are over 100,000 possible Irlen Spectral Filter color combinations, and individualization of the color formula is essential for maximum improvements of all the individual's physical symptoms and distortions. Inaccurate color selection can result in headaches, eye strain, and fragmented brain processing resulting in more distortions and reading problems.

#### If Irlen Syndrome is about light sensitivity, won't regular or polarized sunglasses work just as well?

No. Sunglasses don't do the same thing as Irlen Spectral Filters. Sunglasses cut across the entire spectrum of light to make things darker. Irlen Spectral Filters only filter out the specific wavelength of light that your brain is sensitive to, so they do not make anything darker, do not change the color of what you see, and successfully alter the timing of the information being sent to the brain to allow it to be processed correctly.

## If my child already uses colored overlays, can I just tint glasses the same color as the overlay?

No. With the Irlen Method, the color required in your child's Irlen Spectral Filters is never the same as the colored overlay selected during the Irlen Screening process. Tinting glasses the same color as the overlay can cause changes in neurochemistry that can result in negative brain reactions, causing headaches, nausea, or other unwanted physical symptoms. The proper color selection requires an extensive diagnostic test by a trained professional.

## What if my child won't wear colored glasses or use colored overlays because he doesn't want to be made fun of?

Fear of being or looking different is very common among children, and many Irlen children may be afraid classmates will make fun of them for wearing colored glasses or using colored overlays. Sometimes, this fear is so great it will prevent a child from wearing their Irlen Spectral Filters for a period of time, but most children find the benefit they receive far outweighs any fear of ridicule. You can help your child's classmates be more supportive and understanding by having your child present about Irlen Syndrome to his class. Often, a little information goes a long way in creating a supportive and encouraging environment. Sometimes it helps to have your child use Irlen Spectral Filters or colored overlays at home so that the child can experience how much they help. This may help develop the confidence to use Irlen at school.

#### How to use this Toolkit

This toolkit gives you everything you need to advocate for your Irlen child. It provides the background and information you need as parents to understand and assist your child with Irlen Syndrome, tips for understanding the signs and symptoms of Irlen Syndrome, suggestions for classroom and at-home modifications, tools to explain Irlen Syndrome to your child's classmates, teacher, and doctor, and information about available solutions to address this condition.

Additional resources are available on our website (www.irlensyndrome.org), and we are always happy to help you get the information you need. Please email us at info@irlensyndrome.org.

#### Quick Facts:

1 Incidence:

Affects 15% of the general population, up to 46% of children with reading and learning difficulties, and 30% of children identified as having ADHD and Autism

2 Key Signs:

Slow or inefficient reading, poor comprehension, light sensitivity, headaches, or expression of strain or discomfort when looking at a printed page

Filtering out specific wavelengths of light with the use of Colored Overlays and Precision-Tinted Irlen Spectral Filters, other accommodations to reduce contrast and exposure to bright and fluorescent lighting, including colored paper and

lighting modifications

www.irlensyndrome.org 15 www.irlensyndrome.org 4

# What is Irlen Syndrome?

#### Does your child struggle to read?

Complain that reading bothers his eyes? Dislike bright lights? Is your child always tired or physically ill when coming home from school? If any of these sound like your child, it is possible he suffers from Irlen Syndrome.

Irlen Syndrome is a perceptual processing difficulty. This means the brain does not process visual information properly. It is not a problem with the eyes. Your child may have perfect vision but still complain of words moving or the page looking blurry.

The underlying issue with Irlen Syndrome is a brain that is

sensitive to specific wavelengths of light. Light creates stress on the brain and prevents the brain from functioning normally. Children with Irlen Syndrome may see things differently than they truly appear, and may experience physical symptoms such as eye strain, headaches, and fatigue because of the changes that occur in the brain when reading, writing, copying, and doing homework.

Irlen Syndrome is hereditary and tends to run in families, affecting males and females equally.

However, an individual can also acquire symptoms of Irlen Syndrome as a result of an illness, medical procedure, or head injury (such as a concussion).

Like Autism, Irlen Syndrome is a spectrum disorder, falling on a continuum from slight to severe. Children who can read or perform visually-intensive activities for 40-60 minutes before any Irlen symptoms appear are on the slight end of the spectrum. These children can manage most academic tasks without difficulty, but when endurance is required, their performance may deteriorate. Children with severe Irlen Syndrome will experience symptoms quickly. For some, symptoms may begin immediately. Symptoms will get worse the longer your child continues to engage in visual activity.

#### Know The Signs

There are a variety of different symptoms that children with Irlen Syndrome experience. *The most common are:* 



Light sensitivity



Reading problems











## Frequently Asked Questions

#### Why Didn't My Child's Doctor, Optometrist, or Learning Specialist Identify It?

Irlen Syndrome is not picked up by current medical, ophthalmological, educational, or psychological testing. Many professionals in these fields will have never heard of Irlen Syndrome. Awareness among educational and medical professionals is still in its infancy; but you, as an Irlen Parent, can help educate simply by sharing this information with your child's teacher or doctor. Optometrists correct vision problems due to an abnormality of the human eye. Irlen symptoms are neurological and related to the brain's difficulty processing visual information.

## What Is The Difference Between Irlen Syndrome and Dyslexia?

Dyslexia used to be a problem with letters and words switching around. More recently, the International Dyslexia Association (IDA) redefined dyslexia as a language-based disorder and focused treatment on phonics and using a multisensory structured language approach to help individuals with dyslexia strengthen the brain pathways that connect speech with print. IDA states that it is an inability to connect the letters and words they see on the page with their sounds and meanings. In contrast, Irlen Syndrome is a perceptual processing disorder, meaning that it relates specifically to how the brain processes the visual information it receives. It is what used to be defined as visual dyslexia. People with Irlen Syndrome have difficulty reading because they see distortions on the printed page (letters or words move), or because they experience strain, become tired, get a headache, or fall asleep when trying to read. Unlike dyslexia, difficulties experienced as a result of Irlen Syndrome can reach well beyond just reading. People with Irlen Syndrome have difficulty

processing all visual information, not just words on a printed page; so they often experience difficulty with math calculation, copying, writing, depth perception, sports performance, and other areas not generally connected with dyslexia. It is possible for someone to suffer from both dyslexia and Irlen Syndrome.

Approximately 46% of individuals diagnosed with dyslexia are misdiagnosed, provided with incorrect phonics and language remediation, and do not improve because they really have Irlen Syndrome.

#### I think my child might have Irlen Syndrome. What is the process of testing and determining her overlay and filter color like?

If you have already completed a self-test and are ready for a formal evaluation, the Irlen Method is a 2-step process:

Step 1: Problem Identification – The Irlen
Screening. The Irlen Screening takes approximately
1 hour. During, this session the Irlen Screener
will determine the severity of your child's Irlen
Syndrome and will determine the appropriate
colored overlay.

Assessment. This part of the process is only intended for individuals whose Irlen Screening shows moderate to severe Irlen Syndrome. During this 2-hour appointment, an Irlen Diagnostician will determine your child's color for his Irlen Spectral Filters (worn as glasses). This in-depth assessment allows the Irlen Diagnostician to target the precise wavelengths of light causing your child's problems by using a over 100,000 different of color filter combinations. Colors in Irlen Spectral Filters are extremely precise and individualized for each child's brain. Even slight variations in density or hue of the color selected can make the color ineffective.

www.irlensyndrome.org 5 www.irlensyndrome.org 14





Over 30 years ago, research directed by Helen Irlen under a federal research grant studied methods of helping children and adults with reading and learning disabilities.

It was through this research that she identified a portion of the population suffering from a condition that was not being helped by standard interventions or treatment protocols. Her research defined the nature of Irlen Syndrome and also discovered that color could help this specific population.

For children with Irlen Syndrome, using either Colored Overlays (placed over paper) or Spectral Filters (worn as glasses) can improve physical discomfort and print distortions the individual experiences when trying to read. This intervention is non-invasive, and the improvements in reading and physical discomfort are

often immediate.

Professionals trained in the Irlen Method are able to determine the specific color required for each individual's brain. With over 100,000 different possible color combinations, individualized color is the key to success when addressing Irlen Syndrome. Everyone's brain is different. Research has shown that even small differences in either hue or density of color can render Colored Spectral Filters less effective, or worse, exacerbate symptoms of Irlen Syndrome.



## A CASE STUDY: HAVEN (10 YEARS) AND XANDER (8 YEARS) WRITTEN BY HAVEN & XANDER'S MOM

## The impact that Irlen tinted glasses have had on my family's life is immeasurable.

Haven, our daughter, was failing 3rd grade. After ignoring the recommendations of her 1st and 2nd grade teachers, we realized we had no other choice but to accept it. All the hours spent struggling through homework just wasn't providing results. Then her teacher gave us hope. She suggested having her screened for Irlen Syndrome. Haven had mentioned to her that her words were "swimming" and she remembered a student of hers that had the same issues and wore Irlen glasses.

We researched it and made an appointment. Our lives were forever changed, all because of a pair of tinted glasses. The next year Haven consistently made honor roll, but the impact went beyond academics. Our once shy and timid little girl had found her courage. She started cheerleading, drama, and just overflowed with creative energy.

Xander, our son, was constantly unable to focus in the classroom. He had the will; his 1st grade teacher said she'd never had a student ask to stay in at lunch to catch up on work, but he just couldn't focus. We got a notice that he may be held

back. Our hearts sank. ADHD is what we heard; but after screening him for Irlen we discovered that he was extremely light sensitive. The fluorescent lighting in the class rooms was wreaking havoc. Two months after being fitted for his Irlen tinted glasses, he was recommended, tested, and accepted into the school's Gifted and Talented program.

www.irlensyndrome.org 13 www.irlensyndrome.org 6

## What Causes Symptoms?

Symptoms of Irlen Syndrome are triggered by the environment. Bright and fluorescent lighting, glare, high contrast (black print on white paper), patterns, stripes, bright or fluorescent colors, images with lots of details, large amounts of print on the page, demands for sustained attention, and print size, style and format can all cause problems for individuals with Irlen Syndrome.

When either the environment or visually-intensive activities put stress on the brain, it results in changes in brain chemistry and changes to the nervous system. These changes impact cortisol, serotonin, dopamine, and hormone levels that, in turn, lead to the learning, reading, emotional, and behavioral issues often connected with Irlen Syndrome.



**Bright or Fluorescent Lighting** 



**Patterns and Stripes** 



**Lots of Print on the Page** 





**Bright or Fluorescent Colors** 



**Print Size, Style and Format** 



**Details** 



**Sustained Attention** 



## How To Help Your Child At School?

#### Meet with the Teacher and Principal

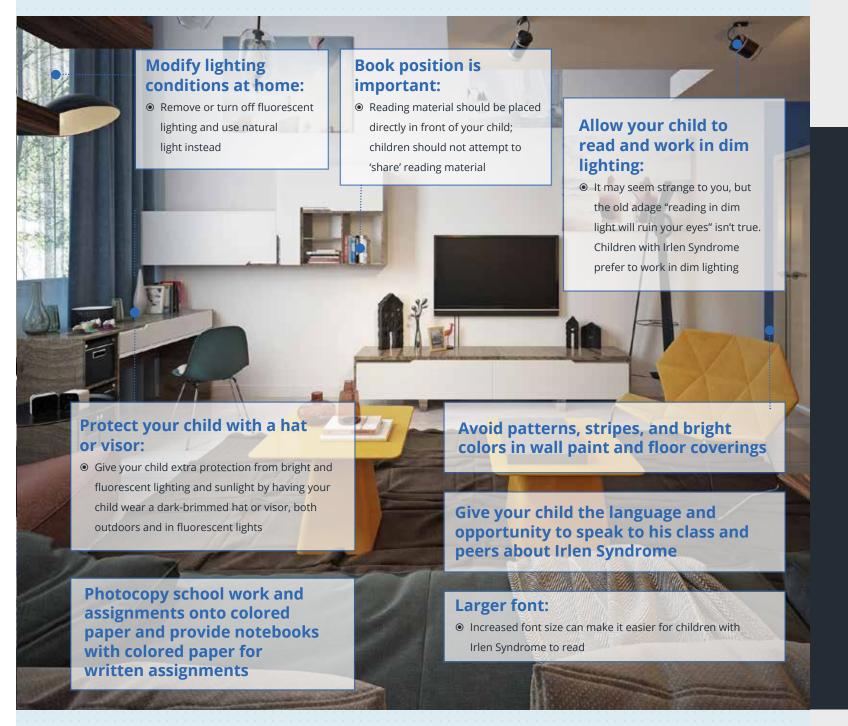
If your child's teacher and school is unfamiliar with Irlen Syndrome, it can be extremely beneficial to request a meeting with the teacher and principal to explain Irlen Syndrome and how it affects your child. On our website, we offer an Educator Toolkit that you can print and bring with you to your meeting and give to your child's teacher and principal (www.irlensyndrome.org)

If your child has had a formal assessment for Irlen Syndrome, you will have a full report from your Irlen Screener or Diagnostician that will document your child's difficulties and recommended accommodations at school and at home. A copy of this report can be added to your child's academic file.

#### Recognized as a Standard Accommodation

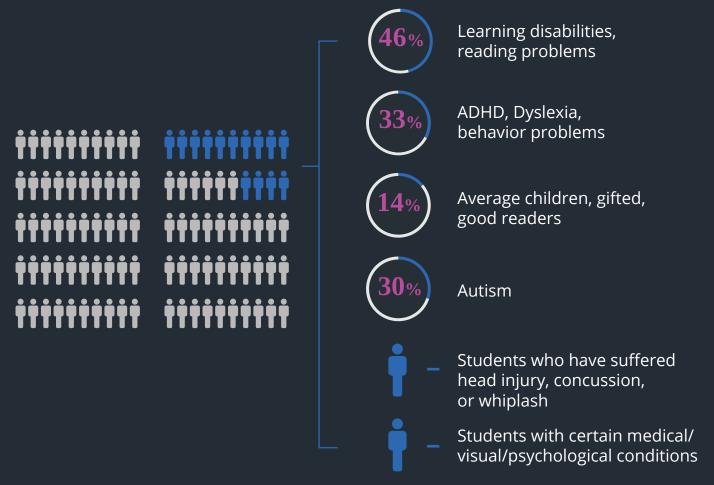
Colored overlays and/or colored filters are recognized as a standard accommodation for standardized testing in many states in America, including California, Arkansas, Florida, Oklahoma, Nevada, Massachusetts, New Mexico, and Washington. The SAT, LSAT, ACT, Recording for the Blind, Illinois Department of Rehabilitation, Indiana Office of Vocational Rehabilitation, Michigan Rehabilitation Services, Texas Commission for the Blind, Nevada Vocational Rehabilitation Services, and Wisconsin Vocational Rehabilitation all officially recognize Irlen Syndrome.

Changes in the home environment can make a big difference in your child's comfort and success at home.



#### How Common Is It?

Irlen Syndrome affects a large portion of the population. While it is especially prevalent in children with learning and reading difficulties, it also affects a number of gifted students and good readers.



#### Is Your Child At Risk?

A simple self-test can determine whether your child is at risk for Irlen Syndrome. Answering "yes" to 3 or more questions means your child should have a formal screening for Irlen Syndrome.

#### **Short Self-Test for Irlen Syndrome**

	Yes	No
Do you skip words or lines when reading?		
Do you reread lines?		
Do you lose your place?		
Are you easily distracted when reading?		
Do you need to take breaks often?		
Do you find it harder to read the longer you read?		
Do you get headaches when you read?		
Do your eyes get red and watery?		
Does reading make you tired?		
Do you blink or squint?		
Do you prefer to read in dim light?		
Do you read close to the page?		
Do you use your finger or other markers?		
Do you get restless, active, or fidgety when reading?		

#### © 2014 Irlen Institute

## What Can You Do At Home To Assist Your Child

Some children have struggled for many years before being properly identified as having Irlen Syndrome. Above all else, letting your child know that it is not his fault, that you know he has been trying hard, and that there are ways to help him can go a long way in repairing self-esteem issues that develop in many children with Irlen Syndrome.

