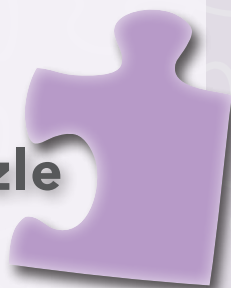




Understanding Irlen Syndrome



A piece of the puzzle



Australasian Association of Irlen Consultants Inc

What is Irlen Syndrome?

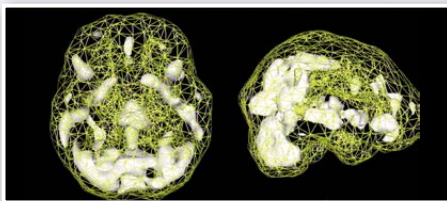
Irlen Syndrome is a **visual processing problem** which appears to be caused by a defect in one of the visual pathways that carries messages from the eye to the brain. This defect causes a timing fault in processing visual information. It is as if the brain was a radio and the frequency selector was not quite on the station so that static interfered with the reception. Irlen Syndrome cannot be identified through standard psychological, educational or optometric testing. It is not an ophthalmological or optometric problem but may coexist with it.

The eyes transmit 70% of the information an individual receives and must be interpreted correctly by the brain. Any problem in the way the brain processes visual information can cause difficulties in the general ability to function, specifically processing, interpreting and interacting with the environment.

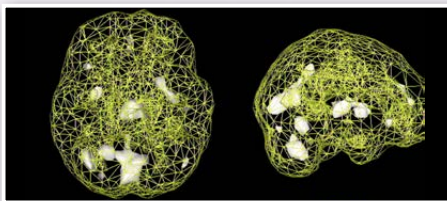
Irlen Syndrome can affect both adults and children, manifesting itself differently for each individual, and interfering with a range of activities which can be a lifetime barrier to learning, for example:

- Academic and work performance
- Behaviour
- Attention
- Ability to sit still
- Concentration

Spect Scans from the Amen Clinic, Newport Beach, California, USA



Brain activity without Irlen lenses



Brain activity with Irlen lenses

How does Irlen Syndrome affect people?

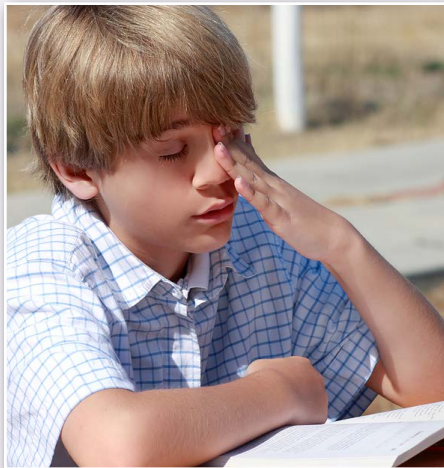
Individuals with Irlen Syndrome will show one or more of the following:

Reading Difficulties

Reading can be slow, word-by-word and inaccurate. There can be problems reading on white paper and though reading may be adequate, they may not be able to read for long periods, even with prescribed reading glasses. Information may require re-reading for comprehension. Music scores or mathematical notation can also be difficult. Because individuals with Irlen Syndrome may have never seen print correctly *they consider the way they see as "normal" and do not report difficulties.*

Irlen Syndrome is different from Dyslexia, and some researchers have labelled the Irlen symptoms as Visual Dyslexia. With coloured overlays or Irlen Spectral filters individuals find:

- Improved reading speed, fluency, accuracy and comprehension
- Tracking across the page is easier
- They can read in ordinary light
- Less strain and fatigue, so are more willing to read
- They can read more, for a longer time



Poor Handwriting

Individuals with Irlen Syndrome display a number of difficulties which affect school and work performance. They may have difficulty copying, taking a long time to recognise letters and write them. Letters can be malformed, of unequal size, with unequal spacing between and within words, wavy baseline and inconsistent slope.

When individuals with Irlen Syndrome write on paper that is their appropriate colour, handwriting can be smaller, neater, faster, more even and they can write more, for longer.

Coloured paper, colour transparencies and Irlen Filter lenses can provide significant help for individuals doing assignments, reports, tests and especially timed tests including NAPLAN and Core Skills Tests for Year 12.

Poor Depth Perception



When there is poor depth perception individuals can be regarded as clumsy, bumping into objects and knocking things over. They may have difficulty participating in sporting activities and difficulty judging distances. Adults may require additional caution while driving, parking or riding a bike.

With better depth perception individuals can navigate their environment better when walking or driving a car, playing sport and maintaining appropriate social distances.

Light Sensitivity

Bothered by glare, lights, sunlight, often identified for wearing sunglasses even on cloudy days, these individuals find it hard to stay focussed when listening, reading, working on the computer or doing other close visual work. This sensitivity can result in poor concentration, anxiety, irritability, the need to take frequent breaks and even physical symptoms such as tiredness, headaches, dizziness and sleepiness. These can be very debilitating and affect ability to complete work to their desired standard, often resulting in low self-esteem and poor promotion prospects. For those with light sensitivity, wearing Irlen Filters results in:



- Reduced tiredness, nausea and dizziness
- Reduced headaches, mood changes and restlessness
- Increased focus and better ability to stay on task and do computer work

Underachievement



Many adults and children, who work hard and still achieve work and output below expectations, may be suffering from Irlen Syndrome. These individuals can do poorly in timed activities, read the bare minimum required and complain of headaches, eyestrain or tiredness when doing visual work, even ***though they are very capable, and some are gifted.*** Irlen Filters reduce visual stress and enable them to achieve to their potential.

Headaches, Migraines and Other Physical Symptoms

These can be symptoms of a more serious medical condition which needs to be ruled out. Many who suffer from tension headaches are unaware that environmental factors may be triggering stress. Irlen Syndrome is indicated when tension headaches, migraine and nausea sufferers indicate they experience stress from the following environmental factors:

- discomfort in sunlight, bright, fluorescent lighting, glare conditions (snow, rain, and hazy days), including bright headlights at night
- stress or strain with sustained reading, computer use or other visually intensive activities
- difficulty looking at stripes, patterns or certain colours which become bright and bothersome



Phyllis Lindamood, Director, Lindamood-Bell Learning Processes, California says

"Individuals come to us for help with a variety of learning difficulties. Most show difficulty in decoding/spelling or comprehension, but diagnosing the underlying cause of that difficulty requires sifting through many specific symptoms. We find it helpful to be aware of the particular symptoms Helen Irlen has identified for Scotopic Sensitivity, since that particular "layer" of difficulty is relatively easy to screen for and to resolve. And resolving any difficulty with visually handling a page of print can make it easier to develop other processes such as phonemic awareness or concept imagery."

What can overlap with Irlen Syndrome?

Autism and Asperger's Syndrome

Irlen Syndrome is likely to be a factor for many individuals with Autism or Asperger Syndrome who demonstrate:

- **Sensory Overload** caused by lights and sunlight can result in behaviour which "filters out" the light: poor eye contact, looking down or away from visual targets, or in a series of short and sideways glances as well as physical symptoms such as anxiety or headaches.
- **Environmental Distortions** can extend to people, property (stairs, walls, floors can appear blurry, moving, changing, and can disappear), and activities such as ball sports. These cause misperceptions which can affect gross and fine motor coordination, ability to interpret facial expressions, and "poor social skills".
- **Print Distortions** can make learning or reading difficult even though reading skills may be good or even advanced.

However, not every individual with Autism and Aspergers Syndrome suffers with perceptual problems, light sensitivity, and sensory overload.

Psychological, Medical and Visual Problems

Robert Dobrin, MD (Amen Clinics) reported that Irlen Syndrome should often be expected in a range of disorders: Bipolar Spectrum, Sensory Integration, ADHD, Anxiety, Tic, Mood and Reactive Attachment. He considers Irlen may also be associated with Migraine, School Phobia, Traumatic Brain Injury, Visual Dyslexia, recurrent automobile accidents, excessive daytime fatigue, and Irritable Bowel Syndrome. As anxiety associated with visual stress is reduced, patients make physical improvements.

Traumatic Brain Injuries, Head Injuries, Concussions and Whiplash

Up to 80% of people suffering from these conditions have one or more of the following symptoms related to visual stress:

- **Reading.** Change in clarity or stability of the print.
- **Sustained Attention and Concentration.** Discomfort in reading and doing other visual activities
- **Light Sensitivity.** Reduced rehabilitation because going outside, bright or fluorescent lighting, and driving at night is uncomfortable or stressful.
- **Physical Symptoms.** Headaches, nausea, dizziness, anxiety, irritability, or stomach aches is often increased by light, reading, and other visually-intensive activities.
- **Depth Perception.** Interferes with home and work related activities that require the ability to judge depth or spatial relationships.
- **Fatigue.** Greater sense of being tired and fatigued.
- **Neurological Problems.** Light-induced seizures, tremors, or other similar problems.



Irlen Spectral Filters eliminate the environmental factors that may be triggering stress and causing headaches and migraines. Many Irlen TBI clients reported improvements even years after the injury and after a variety of previous unsuccessful therapies.

Colour protects the brain from further stress and allows healing to take place. The longer those with head injuries wear their Irlen Spectral Filters, the greater the increase in normal cognitive, behavioural and academic function.

Attention Deficit Disorder (ADD/HD)

There is a large overlap of behaviours between ADD/HD and Irlen Syndrome. Many ADD/HD individuals may be ***mislabelled*** and be suffering from Irlen Syndrome. They may be observed looking away from the page and daydreaming - "inattentiveness". They often rush through activities ignoring careless errors, or apparently "give up" easily.



These are coping strategies to manage visual stress. Telling them to pay more attention or keep trying may not be helpful.

Wearing Irlen Spectral Filters helps provide better focus, requiring reduced effort to achieve the same output. This results in an increased attention span and motivation. Improvements when using colour may allow for easier differentiation from ADD/HD and may reduce need for medication.



Using Irlen Precision Spectral Filters can reduce the need for medication

Who can have Irlen Syndrome?

The identification of Irlen Syndrome depends on what symptoms are being assessed.

- About 46% of individuals with reading problems, dyslexia, or learning disabilities, and **12% of the general population** also have concerns, to a smaller or greater degree, with perceptual processing.
- It occurs on a **continuum** from mild symptoms to very severe symptoms (Irlen H., "Reading by the Colors" 1995)
- It occurs **equally** in people who are gifted and talented and those with learning difficulties, so it is not related to intelligence.
- It can occur with or without dyslexia but is **more prevalent in dyslexic people** varying from 31 to 46% (Irlen and Lass, 1989; Kruk, Sumbler and Willows, 2008).
- It is **highly genetic**, with an 80% chance of a parent passing it to their children and if one child in the family has it, then the chance of other children having it is 50 to 70% (Robinson et al., 1996)
- 80% of inmates participating in prison education programs had a high incidence of symptoms of Irlen Syndrome. (Whichard, Feller & Kastner Sept 2000)



There is also an expectation that Irlen Syndrome may be over represented in trades and in the Defence Force because of the many young people who leave school early due to Irlen Syndrome and pursue those career options. This may be because their strengths lie in hands on activities and verbal communication.

What is the Irlen Method?

The Irlen Method has been used for nearly 30 years to identify and help people with Irlen Syndrome. The Irlen Method determines which precision-tinted coloured overlays and filters produce the most effective elimination of symptoms. The Irlen Method is a two-step process:

- **Problem identification** and severity and whether colour can help reduce or eliminate difficulties.
- For individuals who show moderate to significant improvement with coloured overlays, the second testing session involves using a limitless number of colour filter combinations to **identify the precise wave lengths** of light which will help to overcome the problems. Assessment is carried out not only in reading, but in other areas identified as difficulties - sunlight, glare, depth perception, etc.



This second session is extremely important as colour worn as glasses is not the same as the plastic overlay colour. Wearing the wrong colour, even only slightly different from the colour required, can cause additional or worsened visual stress and problems.

This is why the Irlen Method is only carried out by certified Irlen Diagnosticians.

What Experts say about the Irlen Method

"I have repeatedly seen dramatic, instantaneous response to using Irlen Filters and other transparent overlays; I am now convinced that Scotopic Sensitivity does exist and that it may be responsible for many of the so-called learning disabilities in our schools. I also believe that screening for Scotopic Sensitivity Syndrome should be a regular part of every school health program."

*LouAnne Johnson, author of the best selling book **The Queen of Education, Rules for Making Schools Work**, which inspired the movie **Dangerous Minds***

"There is so much evidence that Irlen coloured filters can literally transform a child's outlook on life that it makes sense to offer Irlen overlays or glasses to every child who needs them."

*Felicity Craig, author of **Conquering Dyslexia***

"Autistic individuals who have benefited from the Irlen Method report seeing better, feeling more relaxed, less sensitive to bright lights, having fewer perceptual distortions, and better fine and gross motor coordination."

*Olga Bogdashina, author of **Sensory Perceptual Issues in Autism and Asperger Syndrome***

"During a 15-month period, I evaluated 460 patients, including both adults and children. Using questions that would uncover problems related to light sensitivity and reading difficulties, I found 122 patients. Many were treated with (Irlen) tinted lenses and were enthusiastic about their improvement. For these patients, Irlen Syndrome is an authentic diagnosis."

Robert Dobrin, M.D., F.A.A.P.

"...our feeling as disinterested outsiders is that the technique developed by Helen Irlen addresses a severe, unmet need in the community, has promise, and has benefited many individuals but requires further validation. We look forward to seeing the results of further work in this fascinating area."

David M. Hailey & Anthony R. Lea, Health Technology Division, Australian Institute of Health

"Should reading educators support an approach that works for some children without knowing why it does? At the risk of sounding scientifically premature, we think they should ... The use of (Irlen) colored overlays and filters may provide the fighting chance many at-risk readers deserve."

William Henk, EdD., Associate Professor of Education and Reading, Pennsylvania State University, Robert J Rickelman, Millersville University

Where is Irlen Supported?

There are presently over 7,000 educators trained as Irlen screeners. Over 100,000 adults and children wear Irlen Filters and millions of individuals are using Irlen Coloured Overlays. Massachusetts, USA and Alberta, Canada have bills pending to require screening for Irlen Syndrome in all schools in these states. Alabama has recognized Irlen Syndrome/Scotopic Sensitivity as a learning disability and all recommendations including the use of Coloured Filters must be allowed.

The Medical Research Council at Cambridge University, Visual Perception Unit of Essex University in England, University Laboratory of Physiology at Oxford University, and Newcastle University in Australia have extensively researched and published studies on coloured overlays and coloured filters.

Recognition in Australia

In Australia, the following are a **sampling of agencies**

which have officially recognized the Irlen

Method: Department of Employment, Education & Training, Department of Defence, Board of Studies-NSW, Board of Secondary Education-WA,

Department of Children's Services-WA, Department of Veteran Affairs, and Technical and Further Education (TAFE). Many individual workplaces support workers who require Irlen Filters.

Many Individual GP's, Optometrists and Psychologists also refer clients.



And in education?

Unfortunately school systems in Australia have not yet officially caught up with the nearly 30 years of research and the knowledge base that extends now to SPECT Scans and genetic studies.

They have been slow to accept that this very **cost effective and minimally invasive** approach can improve the educational outcomes of a very large proportion of children with learning disabilities and of those underachieving, as well as ease the teaching burden, at relatively little cost. An increasing number of progressive schools and individual teachers do implement Irlen.

AAIC members see approximately 10,000 children and adults each year who report symptoms of Irlen Syndrome and approximately 400 individuals a month purchase Irlen Spectral Filters.

Parents report feelings of anger and frustration at the school system's apparent unwillingness to advise that an Irlen Screening may be useful.

Mostly they have been told that their child will not achieve to the level of their peers, because they are immature, lazy or need more effort/practice. Parents are often told they should read to their children more, even though most have been doing that.



Adult clients rue the 10 -30 years and more of **life wasted**, not knowing why they were unable to progress to their potential.

Children with Irlen Syndrome often give up after years of low self-esteem and self-confidence. This can be prevented if children are identified in their early years of school, but identification at any age is important.

What is the advantage of early identification?

- Children can benefit from instruction from "Day 1".
- Schools increase literacy levels - eg NAPLAN
- Government improve literacy results quickly (3 months)
- Fewer children "withdraw" or "give up" on education.
- Reduced behaviour problems related to Irlen Syndrome - reduced need for specialist behaviour/learning programs.
- Teachers have fewer children with academic problems in their classrooms - easier teaching and learning.
- Reduced need for Special Education support by up to 50%.
- Raised results of 12% of individuals with no reading difficulties, who are not achieving to potential.

What are the advantages in workplaces?

- **Increased** - Productivity/output, Morale, Accuracy, Attention, Motivation
- **Reduced** - Workplace related stress, Absenteeism, Errors, Health issues, e.g migraines

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www.aaic.org.au

Want to know more?

Visit www.aaic.org.au

You will find directions to Irlen Centres and Clinics in every State and Territory in Australia as well as in New Zealand

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