

## Scotopic Sensitivity Syndrome and the Irlen Lens System

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There is growing evidence, based on both research and personal reports, that many autistic individuals see their world in a maladaptive, dysfunctional manner. Researchers at U.C.L.A. and the University of Utah have found evidence of abnormal retinal activity in autistic individuals. Additionally, there are many visual problems which are often associated with autism, such as reliance on peripheral vision; tunnel vision; hypersensitivity to light; and stereotypic (repetitive) behavior near the eyes, such as hand-flapping and finger-flicking. Donna Williams, an autistic adult, has written several books about her life and has often commented on her vision. She once wrote: "Nothing was whole except the colours and sparkles in the air..." and "I had always known that the world was fragmented. My mother was a smell and a texture, my father a tone, and my older brother was something which moved about."

Scotopic Sensitivity/Irlen Syndrome is a visual-perceptual problem which occurs in some people with learning/reading disorders, autism, and other developmental disorders. People with Scotopic Sensitivity/Irlen Syndrome experience 'perceptual stress' which can lead to a variety of perceptual distortions when reading and/or viewing their environment. Scotopic Sensitivity is triggered by one or more components of light, such as the source of the light (e.g., fluorescent lighting, sun), luminance (e.g., reflection, glare), intensity (i.e., brightness), wavelength (i.e., color), and/or color contrast. As a result, the person may experience:

- Light sensitivity: bothered by brightness, glare, types of lighting
- Inefficient reading: letters on page move, dance, vibrate, jiggle
- Inadequate background accommodation: difficulty with high contrast
- Restricted span of recognition: tunnel vision or difficulty reading groups of letters
- Lack of sustained attention: difficulty maintaining attention

The Irlen Lens System, developed by Helen Irlen, was designed to treat Scotopic Sensitivity/Irlen Syndrome. Helen Irlen has developed two methods to treat Scotopic Sensitivity: (1) the use of colored transparencies or overlays to improve reading; and (2) tinted glasses to improve one's visual perception of his/her environment.

**Transparencies.** Transparencies or overlays are used to reduce perceptual stress while reading. For some people, letters/words on a page are not perceived clearly and/or not perceived in a stable manner (i.e., letters and words appear to move). The white background may overtake and dominate the person's perceptual system; and the black print of the text may fade into the background. Other symptoms may include having difficulty reading for relatively long periods of time, developing headaches and feeling dizzy. It is possible that, for some, the high contrast between black print on a white background provides excessive stimulation to the visual system and thus interferes with the reading process.

In the Irlen Lens System, colored transparencies are placed over printed text with the result that these problems may be reduced or eliminated. A colored overlay, such as a light blue transparency placed over the text, will reduce the contrast between black and white as well as reduce the dominance of the white background. The optimal color of the transparency required depends upon each person's unique visual-perceptual system.

**Glasses.** In addition to reading problems, people with Scotopic Sensitivity/Irlen Syndrome may have difficulty perceiving their surroundings. Many autistic individuals wear tinted glasses, which were

prescribed by Helen Irlen or at one of her 76 world-wide diagnostic clinics, and have reported rather remarkable benefits. After wearing her glasses, Donna Williams wrote: "These [Irlen] glasses would have changed all that. Faces and body parts and voices would have been whole and understood within a context of equally conjoined surroundings." Other autistic individuals report seeing better, feeling more relaxed, being less bothered by sunlight and/or indoor lighting, and have fewer perceptual distortions which can affect small and gross motor coordination.

Helen Irlen has developed effective methods for determining if a person suffers from Scotopic Sensitivity/Irlen Syndrome. She has also designed a standardized set of procedures which can determine the correct color prescription for the transparency and the tinted lenses.

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Helen Irlen has trained people throughout the world in the use of her methods. For more information, write to: Irlen Institute/PLD, 5380 Village Road, Long Beach, California 90808, U.S.A. (email: [Irlen\\_Institute@compuserve.com](mailto:Irlen_Institute@compuserve.com)); phone: (562) 496-2550; fax: (562) 429-8699.