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Brain in the News Newsletter by Daniel G. Amen M.D.

"Brain in the News" is a weekly commentary on how brain science relates to the news. The brain is involved in everything we do...wherever there are human stories the brain is involved....from the impact of war and natural disasters on the brain to drug abuse scandals to courtroom dramas to politics the brain is in the news, and you can read about it here.

06/30/2004

LIGHT AND THE BRAIN

The brain is everywhere there is news about people. I spent last week lecturing and touring in Alaska, one of the most beautiful places in the universe. The beauty is staggering and goes on and on and on. It is now the time of the midnight sun. Literally, 10PM looks as though it is two o'clock in the afternoon. I traveled with sweetheart, my daughter, son-in-law to be and several friends. Everyone was initially intrigued by the late light, but as it threw off their sleeping cycles, people couldn't wait to once again see the darkness.

Thinking about the effect of light on the brain, when I got home I queried our extensive database of scan images and clinical data to study a condition known as Scotopic Sensitivity Syndrome (SSS), also known as the Irlen Syndrome. What I found was pretty amazing! First a little bit about SSS.

SSS is a type of visual perceptual problem. It is not an optical problem. It is a problem with how the nervous system encodes and decodes visual information. Academic and work performance, behavior, attention, ability to sit still and concentration can be affected. Individuals with this problem see the printed page differently, although they may not realize that they do. Having SSS keeps many people from reading effectively, efficiently, or even at all.

SSS was first identified by Educational Psychologist, Helen Irlen, while she was working with adult-learners in California in the early 1980s. She observed that some of her students read with greater ease when they covered a page of print with a colored overlay. The treatment-method uses specially formulated, colored overlays or colored lenses worn as glasses or contact lenses to reduce or eliminate perception-difficulties.

Individuals with SSS see the printed page differently from those with normal vision and must constantly adapt to distortions appearing on the printed page. They may be slow or inefficient readers, exhibit poor comprehension, suffer from strain, fatigue or headaches. It can affect their attention-span, energy-level, motivation, handwriting, depth-perception and, ultimately, self-esteem. SSS are frequently labeled as underachievers with behavioral, attitudinal, or motivational problems. It is a complex and variable condition sometimes found to co-exist with other learning-disabilities. Common problems with SSS include light sensitivity (bothered by glare, sunlight, headlights or streetlights), problems with white high gloss material, difficulty reading print, numbers or musical notes (problems may include print that shifts, shakes, blurs, moves, runs together, disappears or becomes difficult to perceive), poor depth-perception and problems judging distance and spatial relationships accurately.

When I first learned about SSS I was skeptical. I never heard about it in my psychiatry training program. Yet over time, I had several friends and family members who benefited from the treatment, using colored overlays or wearing tinted lenses. About 7 years ago I started screening my own patients for this disorder. To date we have sent hundreds of people to Dr. Irlen's web site (www.irlen.com) and clinics to get treatment. Many people have gotten significant relief. In this current study I looked at 42 people with the syndrome and compared them to 200 age matched people without any evidence of SSS. To a highly significant degree, there are areas of increased activity in the brain's emotional and visual processing centers and decreased activity in the cerebellum, an area that helps to integrate coordination and new information, with SSS.

Our clinics have scanned several people before and after treatment. Remarkably, when people obtain benefit from the treatment, it helps to balance brain function.

One of the factors that drew me to SSS and the Irlen treatment method is its simplicity and effectiveness. If light bothers you, it may be time to calm the midnight sun, especially if it is irritating your brain.

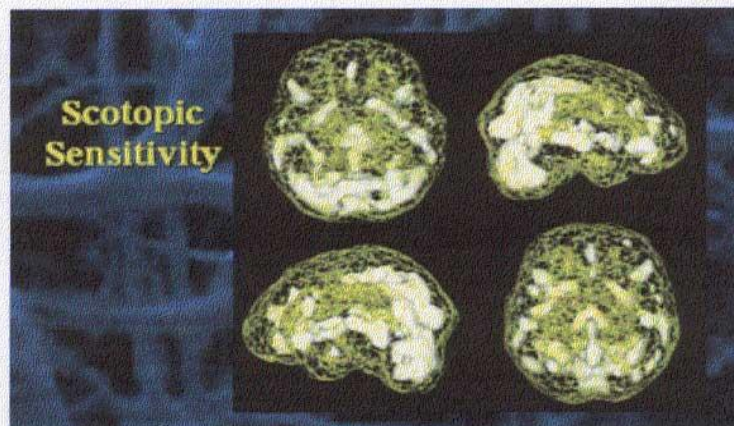
The brain is involved in everything we do and must be considered whenever we look at the motivation or reason behind human behavior.

As a neuropsychiatrist for the past 20 years my clinics have amassed the world's largest database of brain scans related to behavior, more than 21,000. The brain is involved in everything we do and must be considered whenever we look at the motivation or reason behind human behavior.

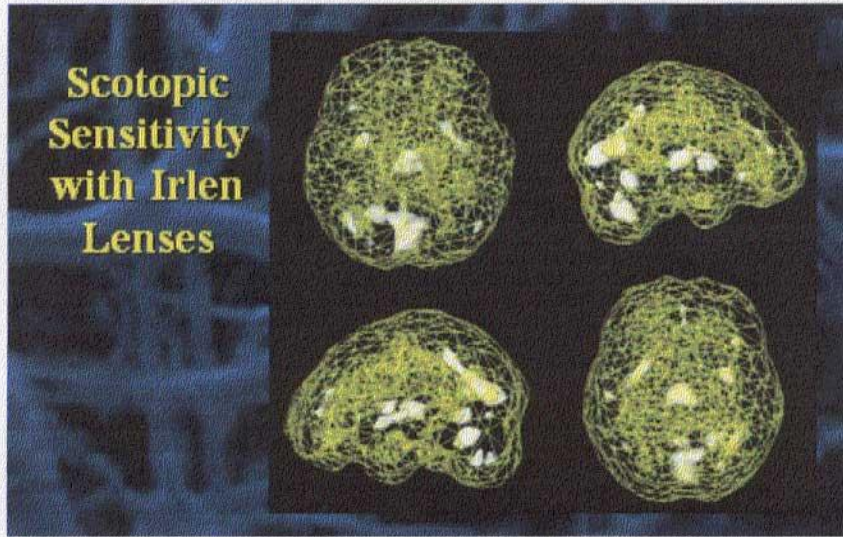
"Brain In The News" is offered as a free service to people in the media to help them educate the public on how the brain relates to our behavior. You can see over 300 color 3D brain SPECT images at www.brainplace.com.

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Brain Scan
Individual with Irlen Syndrome
WITHOUT IRLIN FILTERS-Areas of over stimulation

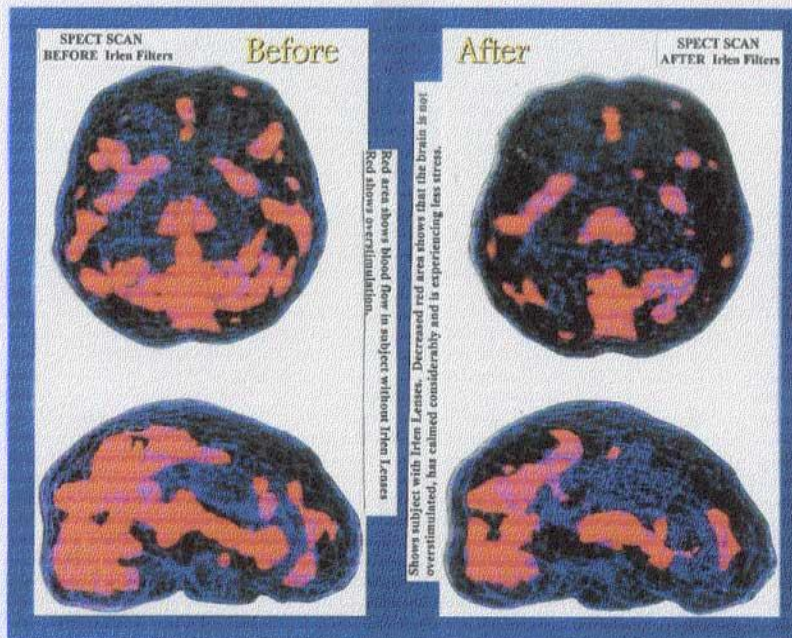


**SPECT Scan
With Irlen Colored Filters
Showing decrease over activity**



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SPECT SCAN



10