

Syntonics Phototherapy Yielding Eye-Opening Results

Posted by Greg Mischio



If you've never heard of syntonics phototherapy, chances are very good that you will in the near future. Syntonics is a form of light therapy used for vision problems. We initially started using this non-invasive procedure on a trial basis, but we now routinely use it with nearly every vision therapy patient.

Why? Because in case after case, the use of syntonics has yielded some impressive results. Here are just a few clinical cases:

- A young athlete told us that syntonics therapy has improved his ability to play sports.
- A child with strabismus (crossed eyes) has experienced a correction in her turned eye.
- A woman who routinely experiences headaches said, "This is like a spa for my eyes."

How does it work? Why is it proving so effective? It's time to shed some light on a little-known therapy that has actually been used by optometrists for nearly 70 years.

How Syntonics Works

Syntonics uses colored light produced by a small lamp. The typical treatment for syntonics requires a patient to sit in a darkened room and view a circle of colored light for 20 minutes over a span of 30 sessions. After viewing the light, the patient eventually experiences improved visual skills.

The color of the light used in the lamp is based on the type of vision problem. "For example, someone whose eye turns out would get a different color than someone whose eye turns in," said Dr. Kellye Knueppel.



One of the diagnostic tests used to determine the need for syntonics treatment is pupil testing.

The specific aspect of pupil function looked at is called "pupillary release." To determine the pupillary release, a penlight is held in front of the patient's eye. The pupil should constrict and stay small for at least ten seconds.

Fast pupillary release occurs with autonomic nervous system imbalances and reduced functional visual fields. A reduced functional visual field is a prominent source of vision problems. "It's like looking through a paper towel tube," Dr. Knueppel said. "You really have to search for what's happening around you, and it's stressful."

This type of visual field problem is not the same as a visual field loss that would occur with a pathology in the eye or brain. A functional visual field problem is a difficulty in how the person processes the information in their visual field. The problem causes the person to ignore a great deal of information in their periphery.

According to Syntonic Phototherapy, an article published by Ray Gottlieb, O.D., PH.D. and Larry Wallace, O.D., these types of field conditions are related to “inadequate functional visual abilities and overall learning and performance deficits.”

Functional field constrictions can improve with syntonic treatment, which leads to increased patient comfort, efficiency, self-esteem and functional/binocular vision.

Dr. Knueppel echoes a point made by Gottlieb and Wallace: “The patients most likely to benefit (from syntonics) have not just one or two but several visual deficits.” These can include:

- Accommodation
- Binocularity
- Visual information processing skills
- Constricted functional visual field

History of Syntonics

This use of syntonics, or light therapy, is not a new phenomenon. In fact, syntonics has been used throughout history.

The Greeks built solarium cities in high mountains to harness ultra-violet rays for healing tuberculosis and to quell the smallpox virus. Medical practitioners throughout the late 19th and early 20th centuries used light to heal.

In the 1920s, clinical application of selected light frequencies began. H. Riley Spitler theorized about the relationship between light and the eyes in biological function and development, and he developed “Syntonics,” a term derived from the word “Syntony,” which means to bring the body into balance.

Spitler’s model suggested that that red light at one end of the visible spectrum stimulated the [sympathetic](#) nervous system, and indigo activated the [parasympathetic nervous system](#).

(The sympathetic nervous system controls functions such as blood pressure and heart rate – the “fight-or-flight” responses – while the parasympathetic is responsible for stimulation of “rest and digest” activities, such as sexual arousal, salivation, ears, urination, digestion and defecation.)



In 1933, Spittler published *The Syntonic Principle*, which included clinical results from syntonic practitioners and showed that 90.7% of individuals taking the treatments responded positively.

Besides our use of syntonics for vision problems, light therapy is used for other medical purposes. The current preferred method for treating neonatal jaundice, for example, is the use of blue or green light.

Studies and Anecdotal Results

A number of controlled studies have been conducted to measure the impact of syntonics on learning (Kaplan, 1983; Liberman, 1986; Ingersol, 1998-1999). They indicate “short-term syntonic treatment can significantly improve visual skills, peripheral vision, memory, behavior, mood, general performance and academic achievement.”

The research also included a number of other interesting findings:

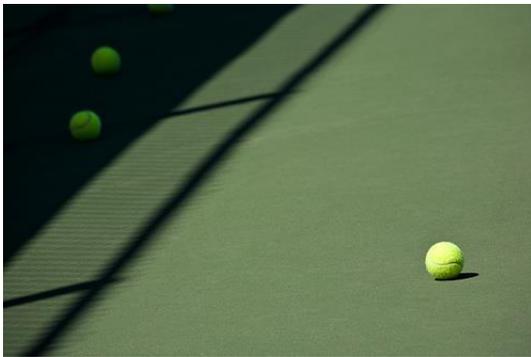
- Children with learning problems have a reduction in the sensitivity of their peripheral vision, which syntonics helped.
- An experimental group given syntonics, vision therapy and tutoring outperformed the group given only vision therapy and tutoring.

Clinical results have also been noted at The Vision Therapy Center, and by Gottlieb and Wallace:

- A 78-year old woman experienced double vision when her eyes suddenly crossed. After twelve 20-minute syntonic treatments, her eyes straightened and she regained balance and coherence.
- A 6-year old girl was diagnosed as being autistic and cognitively disabled, and was so hyperactive that optometric testing was impossible. In just five treatments, she became a calm, cooperative girl.
- An 11-year old boy said he felt happy to play baseball again, and noticed significant improvement.

- A middle school-aged girl, who plays clarinet in an orchestra, could actually look at her music and watch the conductor at the same time. People with head injuries or headaches seem to benefit the most. Gottlieb and Wallace referred to an informal study of 46 head injury patients who had experienced a visual field loss. Seventy percent experienced field expansion after treatment.

Perhaps one example of how powerful the therapy can be is the case of a patient's mother who actually experienced negative effects as the result of syntonics. Her daughter was undergoing treatment, and the mother stayed in the room to ensure the girl was watching the light.



The next day, the mother noticed her tennis game was noticeably off. “It messed me up,” she said. The mother stopped watching the light with her child, and we’re happy to say she’s returned to form.

These success stories are encouraging, and it’s why we continue to track and report progress. “We perform visual function tests, eye movements, pupil responses, functional visual fields and other visual skills to track improvement,” Dr. Knueppel said. “It’s not 100%, but the majority of our patients notice definite and significant changes.”