



Optometric Phototherapy (Syntonic)

The use of colour and light in an optometric setting has been around for more than 70 years. By simply combining specific light colours, frequencies and wavelengths, we can improve the body's regulatory centers in the brain.

When light enters the eye, it travels through the brain to the pineal gland and the hypothalamus (the areas of the brain responsible for chemical and hormone balance). Light application stimulates these areas of the brain, resulting in balancing the body's nervous system, thereby improving vision problems, such as lazy eye (amblyopia), eye turns (strabismus), convergence insufficiency, and focusing difficulties.

This unique light therapy has also proven to be effective for the treatment of:

- Headaches
- Stress
- Learning disorders
- Trauma
- Brain injuries
- Concussions

How does syntonic phototherapy work?

The coloured light used in syntonic phototherapy stimulates the visual system and alters the biochemistry of the brain to improve the balance between the sympathetic and parasympathetic nervous systems. Coloured filter goggles are placed on the eyes for the duration of the light therapy treatment.

Colors like blue and violet are used to stimulate the parasympathetic nervous system (PNS) which is responsible for controlling our homeostasis and leads to pupil constriction. Colors on the blue spectrum have been shown to improve focusing abilities for near vision tasks by reducing adrenaline production, anxiety and stress.

Colors such as orange, yellow, and red stimulate the sympathetic nervous system (SNS) responsible for controlling our "fight or flight" response and leads to pupil dilation. Red and orange are often used to treat lazy eyes, while green and yellow are used to treat esotropia (inward turned eyes).

Can syntonic phototherapy alone treat my vision problem?

In most cases, syntonic phototherapy is prescribed together with vision therapy, specialty lenses and/or prisms to:

- Improve visual acuity and contrast
- Increase visual attention
- Reduce eye strain
- Decrease light sensitivity

Dr. Lazarus, Russel. (December 20, 2020). What is Syntonic Phototherapy?

<https://www.optometrists.org/vision-therapy/neuro-optometry/vision-and-brain-injuries/vision-therapy-for-concussions/what-is-syntonic-phototherapy/>