

Dr. Steven D'Orio | Optometrist





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Did you know that your eyes are always moving, even when you don't see, feel, or notice the motion? These small movements allow us to maintain a steady focus on a line of text or moving object.

Without accurate eye tracking: reading, writing, and other essential tasks can become difficult and uncomfortable. This is recognized as an eye tracking problem or oculomotor dysfunction.

Eye tracking technology enables researchers to gain valuable information about visual processing and cognitive functions. By analyzing eye movements, professionals can understand how individuals perceive and interact with visual stimuli.





Normal eye tracking plays a crucial role in effective reading by ensuring smooth and efficient scanning of text. When our eyes move smoothly from word to word, sentence to sentence, it enhances comprehension and retention.

Proper eye tracking is essential for learning processes, especially in educational settings. It enables students to follow along with text, focus on key information, and engage more effectively with study materials. This results in improved academic performance and better information retention. Normal eye tracking contributes significantly to visual and cognitive development. By allowing the eyes to track smoothly across lines of text or visual stimuli, it enhances concentration, attention to detail, and overall cognitive function.

Efficient eye tracking is vital for various daily activities, such as driving, sports, and even social interactions. In tasks requiring visual coordination, such as hand-eye coordination in sports or following directions while driving, proper eye tracking ensures accuracy and efficiency.



# **Signs of Eye Tracking Problems**

### **Common Signs**

Skipping lines while reading, struggling to maintain focus on the text, and experiencing eye strain are common indicators of eye tracking problems. Individuals may also have difficulty following moving objects or keeping their gaze steady.

# **Behavioural Indicators**

Frequent loss of place while reading, needing to re-read sentences multiple times, or using a finger to guide the eyes along the text can be behavioural indicators of eye tracking issues. People with these problems may also exhibit slow reading speed or poor comprehension.

#### **Emotional Impact**

Frustration and anxiety related to reading tasks can arise from eye tracking difficulties, leading individuals to avoid activities that require sustained visual attention. This can impact academic performance and daily tasks that involve reading or visual tracking.



# Why do eye tracking problems occur?

In some cases, the culprit is a neurological issue such as a concussion or stroke. Diseases or disorders that interfere with normal eve muscle function can also interfere with tracking. This oculomotor dysfunction, also known as an eye tracking problem, occurs when there is a developmental delay or neurological event that interferes with the brain's ability to effectively coordinate the eyes to fixate, follow, and move from spot to spot accurately and efficiently.

Each eye has six extraocular muscles that work together in a sophisticated manner to accurately control eye movements. If these muscles don't coordinate together then saccades, pursuits and tracking abilities will be reduced. These eye dysfunctions can affect every aspect of a person's life.

The next eye focusing problem occurs when the focusing muscle over-contracts when looking at a near stimulus. This eye focusing problem is known as accommodative excess.



The final type of eye focusing problem occurs when the individual has difficulty with both contraction and relaxation of the muscle. This is known as accommodative infacility.





# Treatment For Eye Tracking Problems

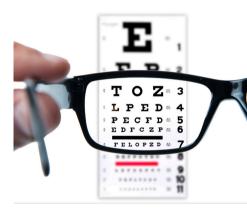
Vision therapy is the treatment for those with eye tracking problems. It is a specialized or custom-tailored treatment program created by an optometrist to help train the eyes and the brain in working together.

This therapy strengthens the neurological pathways between your eyes and your brain to help gain muscle strength and cognitive processing for successful visual tracking.

Vision therapy is very similar to physical therapy. During each visit, the patient is given carefully selected and sequenced exercises along with homework exercises that will need to be done following their next appointment.

The treatment is specifically designed to help the person reach efficient visual skills and eliminate visual complaints associated with eye tracking problems.











Take charge of your visual health by staying informed about the signs of eye tracking problems and the role of vision therapy. By being proactive and seeking professional help when needed, you can work towards optimizing your eye tracking abilities and enhancing your overall visual experience.

Remember, your vision is a vital component of your daily functioning, so prioritize its care and seek assistance if you encounter any concerns.



Watch Our Video: Dr. D'Orio Symptoms | Eye Tracking



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