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FRIENDS OF NVT

OFFICIAL NEWSLETTER OF INNEURACTIVE

INTRODUCTION

Welcome to the fifth issue of volume 8 of our Friends of NeuroVisual Training Newsletter, where we aim to provide you with the latest news and insights regarding NVT! Our goal is to help you understand how NVT can prevent injuries, facilitate rehabilitation, and enhance overall performance. We also provide no-cost actionable instructions to incorporate into your training, practice, and/or general everyday routine.

In this issue, our feature content will focus on the application of NVT in the rapidly growing field of esports. Due to the extended hours of screen time, players in this highly competitive arena are susceptible to eye strain, fatigue, and decreased visual performance. We will examine how NVT can help improve eye-hand coordination, visual processing speed, peripheral vision, and decision-making with multiple moving/flashing on-screen elements. By integrating these training techniques into their routine, esports players can enhance their reaction time, accuracy, and overall performance, giving them that additional competitive edge!

Additionally, for our How-To section, we will be providing instructions on how to conduct and perform Advanced Eye Discipline exercises using the "medium" and "hard" Inneuractive Eye Discipline PowerPoint programs. These exercises are designed to challenge and enhance visual skills, while training eye discipline (in other words, maintaining gaze where you want to maintain gaze), and helping individuals reach their maximum potential.

We hope you enjoy reading this issue and continue to support us in our mission to promote the benefits of NeuroVisual Training.

WHAT'S IN OUR LATEST ISSUE:

@FriendsofNVT

E-Gaming and Neuro Visual Training

Esports Overview
Esports, or electronic sports, are video games played in a highly organized competitive environment. These games can range from popular, team-oriented multiplayer online battle arenas (MOBAs) to single-player first-person shooters, survival battle royales, and virtual reconstructions of physical sports such as FIFA, American Football, and Formula-1 Racing. Esports can be played by professional or semi-professional gamers in an organized format, such as tournaments or leagues, with a specific goal or prize, such as winning a championship title or prize money. The esports market is growing rapidly, with increasing investments, revenue, and audience size.

Effect of Prolonged Screen Time
Esports players spend extended periods staring at a screen, which can cause eye strain and fatigue. This can lead to symptoms such as dry eyes, headaches, and blurred vision. The bright, flickering lights emitted by screens can cause eye strain, as the eyes have to work harder to maintain focus. This extended screen time can also lead to decreased visual performance, consequentially impacting eye-hand coordination, and overall success rates. This is because the eyes have to constantly adjust to the bright lights, moving images, and fast-paced action on the screen, not allowing the lens of the eye to relax and inducing strain similar to an overtrained muscle. This can cause the eyes to become fatigued, leading to decreased visual acuity and slower reaction times. Prolonged screen time may also cause an imbalance in the brain's emphasis on central-to-peripheral vision input/processing. The central vision is responsible for detail-oriented tasks such as reading and object recognition, while peripheral vision is responsible for detecting movement and spatial awareness. Spending long periods staring at a screen can cause the brain to become overly reliant on central vision, potentially leading to neglect of peripheral vision. This can negatively impact a player's ability to react to objects or movements in their peripheral vision, which is crucial in esports games. Fortunately, esports-specific, and tailored NVT, if performed appropriately, can counterbalance some of these negative effects, and even work to improve upon these skills/abilities.

NVT for Esports
Esports athletes need to train a variety of cognitive skills and athletic abilities to improve their performance and earn that competitive advantage. According to research, esports largely test players' mental abilities and fine motor skills. Cognitive skills such as attention, perception, memory, decision-making, and problem-solving are crucial in esports as they help athletes process information quickly and make effective decisions under pressure. Esports athletes also need to have good spatial cognition to remember virtual maps and terrains.

NVT can drastically benefit esports players in a number of ways, from improving performance (both visual and cognitive) to limiting the negative side effects of prolonged screen time. NVT can improve eye-hand coordination by training the visual system to process and respond to visual information more efficiently. This can help players to make faster and more accurate movements using the controllers joysticks and moving their avatar on the screen, ultimately improving their gameplay. We've discussed several NVT-related exercises that can improve eye-hand coordination, such as the Dynavision D2 Light Board, or our Inneuractive Marsden Balls Kit, making sure to have the esports athletes "think" what doing something with their hands like pitch and catch drills. NVT can also improve visual processing speed, which is important in fast-paced esports games where players need to quickly analyze and respond to complex visual information. By improving visual processing speed, players can react more quickly to changes on the screen and make better decisions. NVT-centric exercises that could be beneficial for improving visual processing include T-scope exercises, where important information is flashed at 1/100 of a second on a slide that also includes distractors, visual tracking exercises such as with Saccadic eye charts, or even with contrast sensitivity exercises where players can practice contrast sensitivity by using visual aids, such as a contrast sensitivity chart, to identify and differentiate between different levels of contrast.

NVT can also enhance peripheral vision, allowing players to be more aware of their surroundings and react more quickly to changes happening outside of their central vision. This can be particularly beneficial in team-based games where players need to be aware of the movements and actions of their teammates and opponents. One of the best screen-based peripheral vision NVT exercises is the Advanced Eye Discipline program by Inneuractive, which we will be taking a deeper dive into below for the How-To section.

Additionally, NVT can help players prevent injuries by reducing eye strain and fatigue, which can lead to decreased visual performance and even long-term eye problems. NVT exercises can also help combat visual suppression, which can occur when one eye dominates visual processing, leading to a loss of depth perception and other visual impairments. Furthermore, one of the best ways to “stretch” the eyes is through the Palming exercise (FoNVT I5V4). As a brief overview, “Palming” is what we call our extraocular muscle stretch series. One can also stretch the extraocular muscles to help alleviate screen-induced delayed-onset muscle or eye strain. Palming is when an individual closes their eyes and rests their orbital sockets on the medial aspect of their palms. This adds a slight pressure to the eyes, but most importantly pre-stretches the extraocular muscles. Then we instruct a series of eye movements to further stretch these muscles. We’ve also found that Palming can help relieve some headache symptoms and is useful after long hours of screen time when the eyes are fatigued, and which esports athletes commonly develop. Esports athletes can also practice eye exercises, such as the 20-20-20 rule, which involves looking away from the screen every 20 minutes and focusing on an object 20 feet away for 20 seconds.

Overall, NVT can set the foundation for a strong esports performance and rehabilitation program that can drastically aid these specialized athletes. Incorporating NVT exercises into their training routine can give players a competitive edge and help them achieve their goals in esports.

“How To” – Advanced Eye Discipline

Eye discipline refers to the ability of the eyes to maintain a steady and focused position on a visual target, even in the presence of distracting or moving objects. In other words, it is the ability to keep the eyes in the correct position to gather and process visual information effectively. From this description of eye discipline, it should be obvious that esports athletes are susceptible to deficiencies in this function/process due to their prolonged screen time. In this How-To section, we will be providing you instructions on how to appropriately use Inneuractive’s Retinal Retention + Processing™ program built on the Microsoft PowerPoint software. This advanced eye discipline exercise is an NVT exercise designed specifically to improve visual processing speed, while also enhancing overall visual performance and “afterimage memory”.

This afterimage memory is KEY, but not a common phrase or process. To define this, the afterimage memory of the retina refers to the retention of an afterimage by the cells of the retina, which can be used to evaluate the visual system's function and monitor any changes in visual performance over time. By measuring and tracking the persistence of afterimages, eye care professionals can identify potential visual problems and develop targeted interventions to help individuals improve their visual processing and performance. In the context of NVT, afterimage memory is often used as a tool for developing eye discipline and improving visual processing speed and accuracy. This is what Inneuractive’s Retinal Retention + Processing™ program actively trains, and the instructions for this exercise are as follows:

Instructions:

1 - Open the Inneuractive Eye Discipline PowerPoint program and navigate to the exercise.

2 - Enter slideshow mode and stare at the image on the screen for 10 seconds without blinking. The image will be a white star at the center of the screen/slide.

3 - After staring at the image for 10 seconds, page the slide down using the arrow key or mouse click. It's important to avoid moving your head or eyes during this process, as doing so can interfere with the afterimage observed in the next step.

4 - Make a mental note of the afterimage observed on the screen. The afterimage will appear as a ghost image of the shape or image that surrounded the previous slide’s white star in the center, but with inverted colors. For example, if the white star was on a black background, the afterimage will be a black star on a white background.

Answer the questions in the "notes" section of the corresponding slides. The questions will ask you to identify specific details of the afterimage, such as its shape, color, and location on the screen.

This exercise can be repeated multiple times to improve visual processing speed and enhance visual memory and can be progressed to more challenging examples, such as follows:

6 - Keep your eyes fixated on the star in the center of the circle on the white star.

7 - Be aware of the objects floating around, while maintain gaze and focus on the central white star. Try to identify the images/characters/objects in the peripheral areas. How quickly can you identify all these images/characters/objects? If any at all…

8 - Record the time it takes for the participant to completely identify all the objects to measure the speed of peripheral visual processing.

9 - While still focusing on the star, track the objects: at irregular intervals, the subject is verbally queued to call out the location of the objects. The response communicated in quadrants or clock locations.

10 - Record the number of correctly called quadrants to measure multi-object tracking.

11 – Page down at a random time and have the subject draw or verbally describe the last locations of the objects to develop a clear "after-image."

These exercises have multiple testing objectives, including measuring speed of peripheral visual processing, multi-object tracking, and development of a clear "after-image." By practicing these exercises, esports athletes can improve their eye discipline and peripheral vision, leading to better performance!

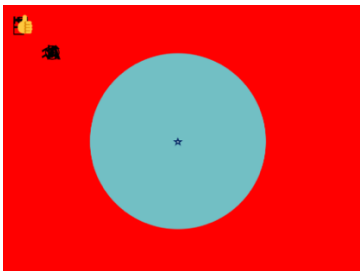

Figure 1.

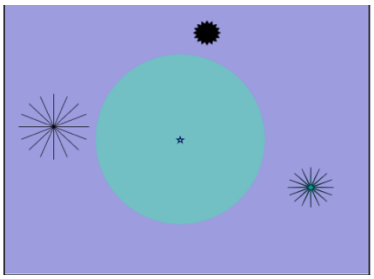

Figure 2.

Announcements

We have added a new comment section to the newsletter, the chat icon can be found to the right. We encourage you to ask questions and interact with the NVT community.

Tricerapro is on sale for a limited time, while supplies last for $35.00 plus S&H (normally > $60.00). If you are interested in trying 1 month supply of Tricerapro email clarkjf@gmail.com to place an order.

Looking to get started with NVT Training? Check out Inneuractive’s NVT Starter Pack! https://inneuractive.com/product/nvt-starter-kit-2/

As always, if you’re interested in learning more about Inneuractive our mission, our products and service offerings, or just Neuro-Visual Training in general, please click the following link: www.inneuractive.com.

Have suggestions for a future issue? Please reach out to clarkjf@gmail.com or info@inneuractive.com and we will do our best to include your request in the future.