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FRIENDS OF NVT

OFFICIAL NEWSLETTER OF INNEURACTIVE

INTRODUCTION

Welcome to Issue 2 Volume 8 of the Friends of NVT Newsletter! In the main portion of today's newsletter, Dr. Joseph Clark discusses simple testing and training methods to improve peripheral vision and field awareness.

In our "How To" this week, Jon Vincent provides methods for strobe glasses training progressions.

Thank you for your support! We look forward to creating more NVT centric content for you! We encourage you all to leave questions and/or comments below.

If you missed an issue, please visit https://inneuractive.com where all issues are available for free. Please tweet and share with your friends as we plan to release more great content. @FriendsofNVT.

WHAT'S IN OUR LATEST ISSUE:

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Simple Testing and Training Methods to Improve Field Awareness

Peripheral vision is often a critical skill for numerous sports and tactical situations. Tunnel vision is a common occurrence for people in high stress and task overload situations. Tunnel vision and decreased peripheral vision contributes to poor performance and decreased situational awareness. Loss of, or decrease in, peripheral vision can occur via numerous mechanisms that are too involved to go into detail here. In this article we discuss some testing methods to assess peripheral vision and / or field awareness.

In Friends of NVT Newsletter I7V7 we discussed our suppression panel. This is where three tests are performed to assess near and / or far suppression. Why, you may ask, does an article about peripheral vision discuss suppression? The simple answer is if a person is suppressing, they are taking a 180° field of view and decreasing it to about 120° field of view. They are losing a lot of their visual field. Thus, if you are interested in ensuring your athlete or client is getting a good view of the field assess suppression, and as suggested in I7V7 test suppression when a person is fatigued. Treating suppression is feasible and aspects of suppression treatment have been addressed in several issues: V1I8, V2I6, V3I4, V4I4, and V7I7. Notwithstanding, do consider assessing suppression and treating it if needed. This will help a person's field awareness.

Two simple testing and training methods for peripheral vision, assessing one eye at a time, are the pinhole peripherals which were discussed in Friends of NVT newsletter V5I4. This test and training modality uses single sheets of paper and can be done by a client or athlete alone or with a proctor to assess the speed and proficiency of the peripheral vision. This is done with one eye patched or closed. The goal is to finish 'reading' the sheet in a clockwise fashion as fast as possible and time how long it takes. The sheets can be in multi color and progress in difficulty. For testing we typically use a proctor to ensure the eyes stay fixed and that they call the color and shapes they see. Training can be done solo, and the subject can record his/her score. Be cognizant of left eye and right eye symmetry for completing these tasks. Significant and consistent differences may mean some uptraining should be considered.

The second testing and training method for peripheral vision uses standard hart charts as discussed in V5I4. Using the 10x10 hart chart the person covers 1 eye and scans down the center of the Hart chart calling out the alpha numeric without saccading their eyes. Cover the columns they are not calling out and move from the center 2 columns out until they cannot perform the task, or they reach the outer two columns. This can also be done by scanning horizontally to test and train vertical peripheral vision. These two tasks (vertical and horizontal) tests and trains horizontal and vertical peripheral vision. It is a task that can be set for someone to do alone as part of peripheral vision training or with a proctor to test the speed and proficiency for performing the tasks. It can be progressed to greater difficulty by changing the color, font, and characters.

Color cards can be used to test and improve peripheral vision. In the Friends of NVT newsletter V5I4 we discuss using 4 color cards to test peripheral vision. The subject calls out the color of the card from the extreme peripheral as soon as they can recognize the color. This is a great testing method, but it can be converted to a training method. Using 4 or more colors the person is tasked with the same instructions. Stare straight ahead and call the color in the periphery as quickly as possible. If you use multiple colors the person needs to call the right hue as a progression to the training. Also, for testing we generally assess at the level of the eyes. For training, randomizing directions as well as colors can be part of the progression.

In this article we addressed some simple methods to assess and train peripheral vision and field awareness. The goal for this article was to help make the reader aware of the constellation of tools discussed and reference those tools to previous articles in the Friends of NVT newsletter. It was our hope that putting these methods together on a focused topic would help the reader integrate these concepts in their practice such that their utility can be expanded to address some common issues encountered when doing NVT on a patient or client.

"How To" – Strobe Glasses Progressions

Strobe glasses are a useful tool during neuro-visual training because they can help improve one's reaction time, visual processing speed, and decision-making abilities. This is possible because strobe glasses work by intermittently blocking the wearer's vision with black lenses, creating a strobe-like effect. This forces the person to rely more heavily on their cognitive and motor skills and less on visual feedback, which can enhance their performance. In other words, when used with effective training methods, strobes can help people to act, or make appropriate decisions more confidently with less visual information that was previously required by the brain. There are several ways strobes are useful during NVT to help train a variety of translational skill sets:

Improved reaction time: The strobe effect of the glasses can enhance one's ability to react quickly to visual stimuli, which is essential in many sports. By blocking out visual information intermittently, strobe glasses can help one anticipate and react to movements more quickly.

Enhanced visual processing speed: By requiring the brain to process visual information more quickly, or make decisions with less visual information, strobe glasses can improve one's visual processing speed. This can help one make decisions more quickly and accurately, leading to better performance.

Increased cognitive demand: Strobe glasses increase the cognitive demand of a task by requiring the brain to process information more efficiently. This can help one develop cognitive skills such as attention, memory, and decision-making, which can be valuable in everyday life and for sports performance training programs.

With that said, the next important question is how does one then appropriately use and train with strobe glasses? Well, that is a great question, because that is what we hope to present in the following paragraphs. Here is a step-by-step guide on how we would progress an athlete through NVT with Strobe Glasses:

Introduce the concept of strobe glasses and assess the athlete's baseline performance: Introduce the concept of strobe glasses to the athlete and explain how they work. Assess the athlete's baseline performance by having them perform visual and cognitive tasks without strobe glasses. This will provide a baseline measurement of their visual and cognitive abilities. Such tasks could be our Marsden balls pitch and catch drills that we have discussed in previous FoNVT issues, as well as Dynavision drills.

Begin with slow strobe intervals and simple tasks: Start the training with slow strobe intervals (e.g., 20% strobe time) and simple tasks such as catching a ball or identifying simple shapes. This will allow the athlete to adjust the strobe glasses and gain confidence in their abilities.

Increase the strobe intervals and complexity of tasks: Gradually increase the strobe intervals and complexity of tasks to challenge the athlete's visual and cognitive abilities. For example, increase the strobe time to 50% and have the athlete perform more complex tasks such such as identifying multiple objects or responding to specific visual stimuli.

Incorporate the strobe glasses into sport-specific training: Once the athlete has adapted to the strobe glasses and is comfortable with them, incorporate them into sport-specific training. For example, have a basketball player wear the strobe glasses while practicing their dribbling or shooting, or have a soccer player wear the glasses while practicing their footwork.

Monitor progress and adjust training as needed: Regularly monitor the athlete's progress and adjust the training as needed. If the athlete is consistently performing well with the strobe glasses, increase the difficulty of the tasks or decrease the strobe interval. If the athlete is struggling with the strobe glasses, decrease the difficulty of the tasks or increase the strobe interval.

Gradually decrease strobe intervals and remove glasses: As the athlete's visual and cognitive abilities improve, gradually decrease the strobe intervals until they are no longer needed. Once the athlete is comfortable performing visual and cognitive tasks without strobe glasses, they can be removed from the training program.

Overall, incorporating strobe glasses into your NVT program can be a valuable tool for improving an athlete's reaction time, visual processing speed, and decision-making abilities. By following these steps and monitoring progress, you can help your athlete improve their performance and achieve their goals, while improving their safety.

Announcements

Is Brain Training The New Anti-Aging? Check out Elle Magazine's article on how brain training has entered the wellness market: https://www.elle.com/uk/beauty/a42882484/brain-training-new-anti-ageing/

The American Society for Neurochemistry is meeting in Lexington in March! If you are interested, you may register here: https://www.asneurochem.org/2023-registration

The National Neurotrauma Society opened abstract submissions this week for their national meeting in Austin, TX June 25-28; https://www.neurotrauma.org/

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.