

FRIENDS OF NEUROVISUAL TRAINING NEWSLETTER.

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Table of Contents.

- Introduction
- Three Ways NVT Can Help Your Program: Performance Enhancement, Injury Prevention, and Cost Savings – Blake Bacevich
- How To: Suppression Assessment and Mitigation Panel
- Announcements
- Disclaimer

Introduction.

This week's Friends of NVT newsletter contains a discussion of three ways we believe that NVT can help your program excel. We discuss benefits such as performance enhancement, injury prevention, and cost savings that all can be a result of an NVT program. Our hope is that if you are trying to start, or expand, an NVT program this information will help you when selling the concept to the people who hold your keys to success. Consider this article as a play book for helping you navigate the pathway to building or expanding your NVT program.

The "How To" section is a description of methods used to determine if a patient or client of yours might be experiencing a type of tunnel vision called fatigue induced suppression. Individuals can get very myopic to the point of neglecting their surroundings during competition and stress and tunnel vision is a manifestation of this neglect. The suppression panel methods presented will help you assess fatigue induced suppression so you can better serve your athlete or client's needs.

As always, thank you for your continued support of NeuroVisual Training and be sure to follow us on Twitter @FriendsofNVT!

Three Ways NVT Can Help Your Program: Performance Enhancement, Injury Prevention, and Cost Savings.

The first step when looking to begin any new program within an organization or team is to be able to sell the concept to the individuals holding the keys to your success. Initiating an NVT program within a team setting is no exception as buy-in from the decision makers is an integral component to successful implementation. Over the past 10 years the University of Cincinnati Athletic Department has had tremendous success in three areas that can help you sell your pitch when looking to begin your own NVT program. Over the past 10 years, implementation of an NVT program has been proven to aid in

performance enhancement and injury prevention all while leading to reduced costs for the athletic department.

Athletes, coaches, and administrators are always on the hunt for the next leg up in the performance enhancement world. Thousands of dollars are spent every year to purchase new weight room equipment and recovery tools all targeted to help their players perform at their best when gameday comes. NVT programs can be thought of as an “untapped goldmine” in this constant search for the next leg up. While training and recovering the muscles of an athlete holds a large emphasis, training of the brain is often overlooked. NeuroVisual Training is a unique training approach that combines brain-centric exercises with the latest sports science for better hand-eye coordination, quicker visual and motor reaction times, and more efficient brain processing. The three pillars of NVT (Volume 1, Issue 1) all serve as an avenue to positively impact on-field performance. Baseball players must be able to track a pitch, football players need to identify and process numerous visual cues while blocking out others aimed at distracting them, soccer players must be able to quickly scan a field to decide where to go next with the ball. NVT exercises address these on-field skills, as well as many more, to allow each player the best chance to excel in their respective sport.

Throughout my experience as an athlete one saying I continue to hear time and time again is that “durability is more important than ability.” While this expression is typically used by coaches to encourage their players to take care of their body, it addresses a very important point. A team could have some of the most talent players in the country, however, if these players are unable to stay healthy and compete on gameday then all the hard work to recruit and develop this talent is unable to be displayed. One of the most common forms of injury, and currently a very hot topic in the sports medicine world, is the mild traumatic brain injury, otherwise known as a concussion. Across the country, the average NCAA Division-1 football program reports 12.4 concussions per year. Concussions typically result in players being sidelined for many weeks leaving them unable to display their skills on the field and help lead their team to victory. Over the past 10 years since instituting NVT, the University of Cincinnati has experienced an 80% decrease in concussions with their athletes while also experiencing an 50% increase in recovery time post traumatic brain injury. In 2017, NVT for the football program was discontinued for the year due to a coaching change. After an average of 2.2 concussions the past 6 years the football team reported having 10 throughout the 2017 season. NVT was reinstated the following season and this number immediately dropped back down to 2 for the 2018 season. There has also been evidence suggesting similar results with orthopedic sports related injuries. With the numerous current recovery tools currently available, the NVT methods discussed throughout these newsletters provide concrete data and results that lead to greater health of the players within your team or department.

While the performance enhancement and injury prevention benefits of an NVT program may be evident, many of these decisions from the higher-ups within an athletic department come down to finances. While the implementation of an NVT program may come at a cost, the long-term in-house savings as a result of the benefits provided from

an NVT program have proved to far outweigh these costs. Injury management of players can prove to be very costly and consume a large part of a departments budget. The National Institutes of Health reports that each traumatic brain injury incurs \$25,000 of medical expenses per year. Since experiencing the decrease in concussions as a result of NVT, the University of Cincinnati has had an average of about \$350,000 (depending upon how one calculates the cost of an athlete's concussion) in savings per year due solely to decreased concussions within the football program. If performance enhancement and injury prevention is not enough to sell NVT to your program, then savings due to decreased costs in injury management may be the missing piece.

Initiating an NVT program within any athletic program has numerous benefits for both players, staff, and department heads. Always remember that receiving buy-in from all of those involved is a critical component to obtaining the desired results. Once you have received this buy-in from players all the way up to those making the big decisions, you are well on your way to creating a positive impact within your team!

“How To” – Suppression Assessment and Mitigation Program.

When we say suppression in this section think in regard to tunnel vision and eye fatigue. In some people, athletes and patients alike, when the brain and eyes get fatigued the brain chooses to turn off one eye. This is called suppression. Fatigue induced suppression likely causes a lot of tunnel vision or visual neglect in people, especially athletes or tactical personnel. In today's how to we'll discuss a simple 3 step method to assess suppression, as well as give some suggestions for mitigating suppression. Please note, suppression is an optometric disorder that should be referred to an eye care professional. What we are attempting to present here is a means for identifying potential problems and educate you on rehabbing it as directed.

It is proposed that Suppression of any cause can be assessed with a simple 3-point panel. This panel can identify suppression, identify the type and severity of the suppression. The panel does not identify the cause of suppression. The three tests are; Brock string, Bates Field Splitters and Thumb thing. The methods for these tests are the conventional methods discussed below.

Brock String. The brock string assesses the eyes ability to converge to a point and focus on that point. The result is two parts. **1.** Two eyes being used – up close suppression assessment and **2.** The two eyes being coordinated together. To begin the test have the person look at a bead on the string at about 14 inches away. Ask them if they see two strings. If they see two strings crossing at the bead they are not suppressing.

Bates Field Splitters. The Bates Field Splitters are two colored cards that provides two pieces of information. **1.** Two eyes are being used – at a distance suppression and **2.** The eyes process the different colors on the different sides of the body correctly. Have the person put on the Bates Field Splitters glasses with the colored cards in front of their

nose. They should look at something 20 feet away but still see two colored cards in front of them.

Thumb Thing. The thumb thing a method to assess near and far suppression. The results are two parts. **1.** Near suppression and **2.** Far suppression. The totality of the tests takes less than two minutes to perform.

Tell the person to look at an object more than 20 feet away – say a flag. Tell them to hold up 1 thumb at the level of the flag. Keep both eyes open, cover the flag with your thumb. Do you still see the flag, do you see two thumbs? Seeing two thumbs is an indication of not suppressing at far. Have the person look at their thumb. Ask, do you see two flags in the background. Seeing two flags in the background indicates not suppressing near.

To perform the suppression panel the “equipment” needed to do the tests are: two color cards (playing cards or 3 by 5 cards), a string with one or two beads on it. The beads can be the size of a water-bottle lid. The beads could be a colored binder clip or a button. Thus the assessment pack is a very small weight and volume that could fit in an envelope or pocket. It could also be rigged from existing equipment.

Scoring:

1. Brock string. 2 strings converge at right place (score 0 to 2). One string = 0.
 2. Bates field splitters, far. See 2 colors and 2 colors cross. (score 0 to 2). One color = 0.
 3. Thumb thing. See 2 thumbs and can go back and forth. (score 0 to 2). One thumb = 0.
- Note, near far and ocular motor can be done and added as additional information.

Grading

- 0 to 1 =. RED
- 2 to 3 orange
- 4 to 5. yellow
- 6. Green



Our Panel

Near Suppression, Far Suppression, Tunnel Vision

Hypothetical actionable information scheme.

Green – no concerns. No changes in performance or performance expectations.

Yellow – Some concerns. Repeat tests in a prescribed time frame to assess tunnel vision progression.

Orange – Concerns. Use prescribed mitigation methods (we have several including a two minute mitigation method and similar treatments). Re-evaluate as needed.

Red – Substantial concerns. Rest and prescribed treatments. Re-evaluate as needed.

Remember to refer to or consult with an eye care professional concerning suppression. Actionable information – depends upon conditions. If seen during practice, consider engaging in suppression mitigation. If seen during game, combat, competition et cetera. Make safety-oriented decisions on next steps. Remember suppressing takes away binocularity, depth perception and is a form of tunnel vision. Identifying and mitigating suppression can improve safety and performance.

Announcements.

If you are interested in all sorts of brain training, you may wish to register for and attend the virtual Carrick Symposium; The Synapse Sessions – 2020. The virtual sessions are from November 13 to 15th from 9:00 AM through to 5:00 PM EST. More information here; <https://carrickinstitute.com/event/synapse-sessions-2020/>.

The #7 University of Cincinnati Bearcats football team is playing Memphis at home this Saturday at noon. Memphis is the reigning AAC Conference champions and beat UC twice last year, once during the season and once in the conference championship. Now at home, the Bearcats have a chance for some redemption

Happy Halloween. Be safe.

Disclaimer.

Nothing in this communication should be construed as a practice of medicine, an endorsement, or political action. The opinions are the opinions of the authors.