

FRIENDS OF NVT

OFFICIAL NEWSLETTER OF INNEURACTIVE



WHAT'S IN OUR LATEST ISSUE:

INTRODUCTION

Welcome to Issue 1, Volume 9 of the Friends of NeuroVisual Training Newsletter! Our mission is to provide you with the latest insights and news regarding NVT and its benefits in preventing injuries, facilitating rehabilitation, and enhancing overall performance. We also aim to provide actionable instructions to incorporate into your training, practice, and daily routine at no cost.

In this issue, we will gain insight into the role and importance of using NVT training methods for Pre-Game or Pre-Training warmups.

Additionally, our How-To section will provide instructions on using NVT for Pre-Game warmups. This edition's How To focuses on athletes.

We hope you find this issue informative and continue to support our mission of promoting the benefits of NeuroVisual Training.

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The Role of NVT Methods for Pre-Game/Pre-Training Warmups

The sympathetic nervous system (SNS) prepares the body for fight, flight, or freeze. These responses are hardwired into our biology, through electrical and chemical signaling mechanisms, and engaging this system prior to a training session or game can improve several performance parameters in competitive athletes.

Several NVT training modalities can stimulate the visual and accommodation responses and awaken the SNS in the athlete. Drills that include near / far ocular movements tend to engage this system faster due to how our eyes and brains work together to process dynamic visual information. Additionally, through evolution, we've been wired to perceive things that are coming at us as a threat, which again stimulates the SNS.

Pregame warmups and rituals are common for many athletes, however, the teachings and or methods to help the brain get game-ready are poorly studied. We know that the SNS acts like a gas pedal with the way it provides stimulation to many organs, and by using the proper NVT drills we can leverage this system to get the brain and body ready for training or a game faster.

In NVT, we consistently draw parallels to strength and conditioning. And just like in the weight room where there's a demand to activate the body with dynamic warmups and mobility work, the brain and eyes are often left unattended regarding activation and warmup. NVT can integrate into traditional warmup-based activation work by becoming a station within the activation phase of training and fulfill the unknown demand for SNS stimulation prior to training or a match. Failing to properly warmup in the weight room can lead to injury or fatigue later in the session, the same applies for the NeuroVisual system. To avoid fatigue-induced suppression and maintain great tracking ability in the waning moments of a game athletes should be using NVT as part of their pregame and pre training rituals.

Auburn University's starting goalkeeper, Maddie Prohaska, has been using NVT as a warmup for the 2023 spring season to enhance performance in training.

"After starting my NVT training, I saw tremendous growth in my game, almost instantaneously. I used the warmup before every practice. It took about 5 minutes and really helped get my brain, eyes, and body all turned on. This helped me go into practice more confident, knowing everything was on the same page. My spring training had ups and downs but my eyes and brain connectivity with my body was one of the biggest growths I saw throughout the spring. The NVT warmup was a quick and easy way to help grow my game to the next level."

Here's a clip of a hockey player using the NVT drill of scanning saccades with and without the head turn to warmup before Game 7 of the 2018 Stanley Cup Western Conference Final:

<https://www.youtube.com/watch?v=7jflsPHMqqE>

One of the caveats of this warmup is that there is minimal processing with the method he's choosing (just going to and from a generic target). Using standard Hart Charts can help touch on the ocular movement, but more importantly, the movement plus processing. Therefore, the brain's control systems, motor systems and sensory systems are being warmed-up. What is somewhat missing is activating the brain's cognitive systems during warmup or pillar 3 of NeuroVisual Training (V111).

These warmups can be tailored to be sport-specific, like traditional NVT, and in the next part of this newsletter, we'll look at how to structure several NVT drills to encompass a sport's brain and eye requirements, then compact that into a warmup regiment which can be completed within 5-7 minutes.

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

“How To” Do Pre-Game Warmups with NVT Part 1: Athletes

Do you feel physically prepared but mentally unprepared before games? Have you ever had to “knock the rust off, in the first part of a game?” Have you ever found getting to game speed coming off the bench challenging? What if you could cognitively and visually get to game speed before hitting the field? Would you do it?

There is growing evidence that NeuroVisual Training (NVT) can improve athletic and cognitive performance overall, but research on using NVT as a warmup is relatively sparse. In this week’s “How To,” we will explain how athletes can use cornerstone NVT drills to get to game-speed faster and complement their pre-training/pre-game routine.

Let’s use Maddy, a Division 1 women’s goalkeeper at Auburn University (see feature article in this issue), as a “test subject.” Goalkeepers have several in-game requirements that we need to engage prior to hitting the field:

Eye discipline & Accommodation: use near/far saccades or Brock string jump ductions to engage the accommodative process, improve eye discipline, and stimulate the sympathetic nervous system (See I7V4 for brock string methods).

Scanning: utilize Hart charts set at a wide distance (30-40 feet) to work the neck and the eyes together while warming up acuity and processing abilities while moving side to side (See I7V1 for scanning saccades methods).
power.

Peripheral Processing: warmup peripheral

vision using pinhole peripherals or a Dynavision Light Board (See I4V2 for Dynavision methods and I2V8 for pinhole peripherals methods).

Eye-Hand Coordination: warmup processing and eye-hand coordination with products like Marsden Balls (See I6V6 for Marsden Ball methods).

Impulse Control & Decision Making: Practicing Stroop levels 1 & 3 to work on impulse control and decision-making skills (See I8V2 for Stroop Methods).

To ensure an efficient warmup routine, it’s essential to keep the drills brief. Here’s an example of how Maddy’s warmup program was structured:

Monday (5-7 minutes before):

1. Scanning Hart Charts – horizontal for 2 minutes (choose 1).
 - a. Moving eyes only for 1 minute.
 - i. Rest 30 seconds.
 - b. Moving head only for 1 minute.
 - i. Rest 30 seconds.
2. Near/Far – 3 minutes (choose both eyes OR left eye and right eye).
 - a. Both eyes 1 minute.
 - i. Rest 30 seconds.
 - b. Left eye, 1 minute.
 - i. Rest 30 seconds.
 - c. Right eye, 1 minute.
 - i. Rest 30 seconds.
3. Brock String – 2 minutes (choose 1).
 - a. Loops for 1 minutes.
 - i. Rest 30 seconds.
 - b. Jump ductions for 1 minute.

Tuesday (5-7 minutes before)

1. Stroop ~3 minutes.
 - a. Level 1 – time to completion.

- i. Rest 30 seconds.
 - b. Level 3 – time to completion.
 - i. Rest 30 seconds.
2. Near/Far – 2 minutes.
 - a. Both eyes 1 minute.
 - i. Rest 30 seconds
 - b. Both eyes, with pinhole glasses on, 1 minute.
 - i. Rest 30 seconds.

It is important to do these drills proficiently and as fast and correctly as possible. You want to push to do well, but not so hard you get fatigued. Make sure you are proficient and comfortable doing these drills before starting them for warmup.

The warmup routine focuses on specific areas each day to maintain “muscle confusion” to prevent complete adaptation. Just like in strength training, variety is vital for continued progress. Consistency is key, so make sure to routinely implement the NVT warmup into your pre-training/pre-game habits. You want to keep the warmup fresh, but familiar using a menu of options that you can choose from based on your needs. Notwithstanding there are those who have ritualized their pregame warmup and choose to keep it constant. That is of course okay as we are all different. Do what works for you.

Like with your strength training activation phase, your NVT as a warmup should be designed to benefit *you, your body, and your game*. Customize the warmup to suit your specific sport and athletic requirements. You can record your NVT results and analyze their correlation with performance or simply use them to feel more engaged and prepared. The goal is to give you what your eyes and brain need to reach game speed.

Announcements

A recent article, <https://pubmed.ncbi.nlm.nih.gov/37204092/>, showed that headgear does not prevent sports related concussions. However, NVT has been published to decrease sports related concussions. <https://www.ovpjournal.org/uploads/2/3/8/9/23898265/3-2-3.pdf>.

Exercise is key for maintaining physical and mental health. Studies show that it positively affects health even if started later in life. Some suggest that exercise improves cognition! <https://flip.it/HWZKB7>

As always, if you’re interested in learning more about Inneuractive our mission, our products and service offerings, or just NeuroVisual 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.

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