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FRIENDS OF NVT

OFFICIAL NEWSLETTER OF INNEURACTIVE

INTRODUCTION

Welcome to Issue 5, Volume 9 of our Friends of NeuroVisual Training Newsletter, where we explore the cutting-edge developments shaping the future of vision and cognition. This month, we focus on a topic of immense relevance and urgency: the role of NeuroVisual Training (NVT) in reducing fall risk among the elderly population. With the complexities of aging affecting both physical and cognitive functions, we investigate how NVT can be a game-changer in fall prevention, improving not just vision but also the brain's ability to process visual information.

In our feature article, we introduce you to Inneuractive, Inc.'s newly launched service, Neurobics™. As an innovative player in the field, Inneuractive is setting the standard for how NVT can be systematically deployed to enhance peripheral vision and visual processing in older adults, with the ultimate goal of reducing fall risks. We offer an in-depth look at this revolutionary service and its potential to transform geriatric care.

Also, don't miss our special 'How To' article for this issue: "Taking Patients to Failure with NVT." This piece will guide practitioners through the challenges and rewards of pushing patients to their limits within the safety and structure of NeuroVisual Training. It's a must-read for anyone engaged in the practice of NVT or looking to incorporate it into their care offerings.

As always, we're here to equip you with the knowledge and tools to stay at the forefront of this rapidly evolving field. Together, we can better understand the complex relationship between vision, cognition, and mobility, and take concrete steps to improve the quality of life for our aging population. Thank you for joining us on this exciting journey.

WHAT'S IN OUR LATEST ISSUE:

@FriendsofNVT

Unlocking Safer Aging: The Impact of NeuroVisual Training on Fall Prevention

As we age, both our bodies and minds undergo significant changes, affecting not only our visual function but also our brain's ability to process visual information. This multifaceted decline in vision, which includes reduced visual acuity, contrast sensitivity, glare sensitivity, and visual field size, combined with diminished cognitive ability to process visual signals, has been shown to contribute significantly to increased fall risks among older adults. A large-scale survey of 3299 older adults demonstrated this correlation, emphasizing the particular role of visual field deficits as a strong predictor of falls (PMC5913798). Unfortunately, traditional vision tests often overlook these nuanced visual functions and cognitive processing capabilities, resulting in underdiagnosis and insufficient preventive measures for those at risk.

Given this landscape, it becomes essential to target older individuals with visual impairments for fall risk assessment and intervention. One promising approach to mitigating the risks associated with the decline in visual function and the brain's ability to process visual information is NeuroVisual Training (NVT). NVT aims to engage the brains of geriatric patients by challenging them to "think" while performing tasks and exercises, particularly when their lower peripheral vision is engaged. The training is designed to improve the brain's processing of visual information, enhance visual perception, and potentially improve gait and balance control, thereby reducing fall risk.

NVT goes beyond mere visual stimuli; it incorporates cognitive elements to stimulate the brain's ability to interpret and react to visual information, which is crucial for complex tasks like walking, climbing stairs, or even avoiding obstacles. By engaging the brain in this manner, NVT aims to create a more robust neural network that's better equipped to handle the multi-dimensional aspects of vision that contribute to safer movement and better balance. Therefore, this could be a pivotal addition to healthcare programs aimed at reducing fall risks among older adults.

We at Inneuractive, Inc. are making strides in standardizing the approach to improving visual function and cognitive processing in older adults with their newly released service, Neurobics™. By focusing on specialized exercises and tasks designed to enhance peripheral vision and visual processing abilities, Neurobics™ aims to offer a systematic and comprehensive solution for geriatric patients. This innovative service could play a crucial role in reducing fall risks, thereby promoting a safer and more independent lifestyle for older adults.

For example, Neurobics™ currently has three groups of adults, all over the age of 60 doing NVT 2-3 days per week. The oldest group of clients are 85 years old and within this group, the adults have very different capabilities. The programming of the NVT sessions and expert coaching is what separates Neurobics from the traditional gym and fitness setting.

Each session (class) consists of 30 minutes of activity with a chance to warm up and cool down before and after each session. The focus of each class is broken into three categories: strength & mobility, balance, and cognition.

The class programming is the same for everyone, however, Neurobics™ uses assessments and a tier system to determine the skill level of each client and modify the programming for the various skill levels. By having exercise modifications that reflect a particular client's skill level without separating them from the group, instills confidence and motivates them to work harder.

Neurobics™ has seen this intrinsic drive develop with our 80+ age group class. The clients stay engaged and competitive despite being at drastically different skill levels. A particular favorite for this group is competing on the Dynavision board doing red-right, green-left.

We're 12 sessions in with the 80+ age group and are already seeing positive impacts with our clients from both a strength and cognitive standpoint. By using exercises and equipment that are relevant to our clients' abilities and everyday lives, we're able to improve balance, strength, stamina, mobility, cognition and more all while creating a sense of community for this often-overlooked demographic.

“How To” – Gamify T-Scope Training in NVT

Many sports performance coaches are quick to claim their expertise in taking an athlete to failure. Often this involves endurance, strength, quickness and stacking those condition activities to fatigue the athlete. While that has a place in conditioning, @FriendsofNVT trainees are familiar with taking an athlete to failure concerning tasks, task complexity and task stacking. We’ve talked about sequential processing, dual tasking and multitasking previously (I7V4). In this issue we talk about stacking tasks to elicit a failure in performance of the athlete. This failure of performance is to a certain extent a decision to fail. The athlete will decide what he/she can do and choose to de-emphasize certain tasks. This decision to fail can be important in deciding what strengths and skills to improve in isolation and / or in combination with other tasks. As an NVT trainer you can use this failure decision to craft future drills to emphasize. To follow is a how to on taking an athlete to failure and how you might use this to progress your athletes.

This is one example of how a stacked exercise can be used to progress to failure. There are many methods that can be combined to achieve the same task.

Please note that each individual task is performed in isolation to a proficiency level and then combined, one or two at a time, to generate complexity and difficulty.

We’ll start this How To with the task overload condition. Please recall, this can take multiple sessions to get a person to this stage.

Consider the following multitasking drill.
An athlete standing on a half bosu ball. He / she is listening to words be called out and must remember groups of 10 words at a time. He / she is also catching Marsden balls with the following instructions: Red balls caught in the right hand, green balls caught in the left hand, Blue Balls caught in both hands, all other colors caught in either hand, the balls can be solid, have alphanumeric or shapes on them. The athlete is instructed to call out the alphanumeric or the shapes in the air. PLUS, we have 3 people throwing balls at the athlete sometimes in sequence and sometimes at the same time. The athlete is told that if more than one ball is coming at them at the same time, they are to prioritize the balls. The prioritization is alphanumeric first priority, shapes second priority and solid third priority. Please see I6V7 concerning the Marsden ball methods. As the NVT specialist you are to note what tasks they continue with and what tasks they do poorly.

Do they not recall words? Do they drop all the balls? Do they not prioritize? Do they stop communicating the alphanumeric or shapes? Do they lose their balance more? What they continue to do well they are comfortable with. What they choose to not do or do poorly is what they are less comfortable with and can be trained later in isolation. While they will see that this is difficult, they often are pleasantly surprised at how many complex tasks they can do with the NVT training. Also, they will see the further benefits of NVT training in getting better at complex tasks.

This activity is an activity that can generate frustration. Remember you will have worked up to this by adding tasks one or two at a time and built a relationship concerning their performance and multitasking activity. Also, the goal is not to do this every session, every day. The goal of taking someone to failure is to learn what their weaknesses are and what to train. Everyone has a task overload limit. Getting here and using the way they choose to fail or de-emphasize certain tasks can be a great guide in furthering their NVT based performance enhancement training.

What tasks you choose to use is up to you. This article was designed to pass along the concept and give one example. Please have fun designing your own program to take your athlete to failure.

Announcements

We are pleased to announce that one of our FoNVT co-founders, editors, and authors welcomed their newborn son, Christopher John Vincent, into this world on Sept 2, 2023. Mother, Father, and Baby are all healthy and well!

Check out our store, http://www.inneuractive.com/shop ! We regularly add new products and are excited for the upcoming launch of our NVT warmup panels.

We encourage our Friends of NeuroVisual Training community to engage with these enriching resources. Your commitment to staying updated fuels the advancement of our field, and for that, we are sincerely appreciative.