

## Vestibular Physiotherapy for Individuals with Peripheral Neuropathy

Peripheral neuropathy is a condition that affects the nerves outside the brain and spinal cord, often symptoms like numbness, tingling, muscle weakness, and balance issues. For many individuals, these symptoms can also result in dizziness, vertigo, and difficulty with spatial orientation. Vestibular physiotherapy Spruce Grove offers targeted interventions that can significantly alleviate these symptoms, improve balance, and enhance the quality of life for those dealing with peripheral neuropathy. At Sunrise Physical Therapy, specialized physiotherapists utilize evidence-based techniques to address vestibular symptoms in individuals with peripheral neuropathy. This article explores the role of vestibular physiotherapy in managing these symptoms and improving functional movement for affected individuals.



## **Understanding Vestibular Dysfunction and Peripheral Neuropathy**

It consists of the inner ear, which detects motion, and the brain, which interprets this information. When there is damage or dysfunction in the vestibular system, it can lead to symptoms such as dizziness, vertigo, and imbalance. Peripheral neuropathy, which often

results from conditions such as diabetes, autoimmune diseases, or nutritional deficiencies, can affect the sensory nerves that carry information from the skin, muscles, and joints to the brain. This can impair the body's ability to sense position and movement, instability and balance issues.

For individuals with peripheral neuropathy, these challenges are compounded by sensory impairments. The damaged nerves may not transmit proper information about body position and movement to the brain, making it difficult for the individual to maintain balance, particularly when transitioning between different postures or environments. This can result in a heightened risk of falls, decreased mobility, and reduced quality of life.

## The Role of Vestibular Physiotherapy

Vestibular physiotherapy is a specialized field that focuses on diagnosing and treating balance disorders. It involves exercises and techniques designed to improve the functioning of the vestibular system, enhance sensory integration, and strengthen muscles that support balance. At Sunrise Physical Therapy in Spruce Grove, therapists utilize a variety of approaches tailored to the needs of individuals with peripheral neuropathy, focusing on reducing dizziness and improving coordination.

Assessment: The first step in <u>vestibular physiotherapy</u> is a comprehensive assessment to understand the specific symptoms and limitations of the individual. Therapists evaluate the patient's history of symptoms, perform tests to assess balance and coordination, and conduct diagnostic tests such as videonystagmography (VNG) or electronystagmography (ENG) to examine eye movement and assess vestibular function. This allows the therapist to create a personalized treatment plan based on the individual's specific needs.

Habituation Exercises: One common technique used in vestibular physiotherapy for individuals with peripheral neuropathy is habituation exercises. These exercises involve repeated exposure to movements or situations that provoke dizziness or vertigo. At Sunrise Physical Therapy, therapists teach these exercises gradually, ensuring that the patient is comfortable and safe throughout the process. The exercises may include activities such as turning the head quickly from side to side, following a moving object with the eyes, or walking on uneven surfaces.

Balance Training: For individuals with peripheral neuropathy, maintaining balance can be particularly challenging. Therapists at Sunrise Physical Therapy use specific balance training exercises to enhance proprioception (the sense of body position) and improve muscle strength. These exercises may involve standing on unstable surfaces, such as balance boards

or foam pads, which challenge the body's ability to stabilize itself. The use of visual and vestibular inputs can further enhance the training process by requiring the patient to rely more on their vestibular system and proprioception for balance.

Gaze Stabilization Exercises: Gaze stabilization exercises are designed to improve the brain's ability to maintain stable vision while moving the head. This is particularly useful for individuals with peripheral neuropathy who experience blurred vision or difficulty focusing when moving. The exercises involve following a moving target with the eyes while keeping the head still, or vice versa, to strengthen the vestibulo-ocular reflex (VOR). By training the VOR, the patient can improve their ability to track objects with their eyes and maintain clear vision during head movements.

Adaptation Exercises: Another effective approach is adaptation exercises, which help the brain adjust to altered sensory input. These exercises involve controlled movements that challenge the body's balance and require the vestibular system to adapt to new patterns of sensory information. For individuals with peripheral neuropathy, these exercises may involve walking on a treadmill with changing speeds or directions, or performing exercises while blindfolded to reduce visual input and increase reliance on the vestibular system.

Education and Lifestyle Adjustments: In addition to physical exercises, vestibular physiotherapy at Sunrise Physical Therapy involves educating patients about lifestyle adjustments that can reduce the risk of falls and improve overall balance. This may include advice on avoiding sudden changes in position (like quick head turns), ensuring proper lighting at home to reduce the risk of stumbling, and using mobility aids if necessary. Therapists also provide tips on exercises and stretches that can be done at home to continue progress between sessions.

## Conclusion

At <u>Sunrise Physical Therapy</u> in Spruce Grove, vestibular physiotherapy provides a targeted approach to managing the challenges of peripheral neuropathy. By addressing both the vestibular and sensory components of balance, therapists can help individuals regain stability, reduce dizziness, and improve functional movement. If you or a loved one is struggling with peripheral neuropathy and its impact on balance and mobility, consulting with a vestibular physiotherapist can provide the support needed to live a safer and more active life.

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