Labyrinthitis/Vestibular Neuritis

Labyrinthitis/Vestibular Neuritis Is a condition that involves inflammation of the membranous labyrinth of the inner ear or, in the case of Vestibular Neuritis, direct inflammation of the vestibular nerve. Patients with Labyrinthitis/Vestibular Neuritis often present with symptoms such as nystagmus and vertigo, which places them at increased risk of falls due to accompanied postural and gait instability. Treatments for Labyrinthitis/Vestibular Neuritis will center around improving postural control and gait and incorporating methods to aid in adaptation to sensations of dizziness and reduce nausea.



PLAY PICMONIC

Causes

Inner Ear Infection

Inner-city Ear Infectious-bacteria

The majority of acute cases of labyrinthitis are caused by viral or bacterial infections of the inner ear. Viral infections may include Ramsay Hunt syndrome, measles, and mumps, whereas bacterial infections include otitis media, meningitis, and Lyme disease. These infections will cause inflammation of the labyrinth of the inner ear (labyrinthitis) or can inflame the vestibular nerve (vestibular neuritis).

Signs and Symptoms

Postural & Gait Instability

Posture and Gate on Unstable-ground

Due to dizziness and visual disturbances, patients with Labyrinthitis/Vestibular Neuritis may appear unsteady and have difficulty maintaining an upright posture. During a gait analysis, these patients may be unstable and lack coordination.

Vertigo

Vertigo-vortex

Vertigo is a common symptom with many vestibular disorders and is signified by unpleasant visual disturbances. Oftentimes, patients will report feeling as if “the room or environment is spinning,” which leads to great distress in many patients. The sensation of vertigo, like many other symptoms of Labyrinthitis and Vestibular Neuritis, is often significantly increased by motions of the head.

Nystagmus

Nostradamus

Nystagmus describes a rapid involuntary motion of the eyes. The eyes can move in a multitude of directions and at varying speeds depending on the type of nystagmus. Nystagmus with Labyrinthitis/Vestibular Neuritis can negatively affect a person’s ability to focus on and track objects which may impair visual acuity.

Increased Fall Risk

Up-arrow Fall Risk

The multitude of symptoms associated with Labyrinthitis and Vestibular Neuritis are liable to make normal walking an issue for many patients. Due to visual and vestibular disturbances such as vertigo and dizziness, patients often report difficulty maintaining balance when walking and may require aid to prevent themselves from falling.

Dizziness

Dizzy-eyes

Dizziness, often described as a feeling of lightheadedness or unsteadiness, is a commonly reported symptom of Labyrinthitis/Vestibular Neuritis. It should be noted that vertigo, the sensation that the room or environment is spinning, is not the same as dizziness, although the two will typically occur in patients simultaneously. Dizziness can impede normal, everyday functioning, specifically in the areas of gait and vision, and may cause additional symptoms such as nausea and vomiting.

Sign up for FREE at picmonic.com

Nausea and Vomiting

Vomiting

Nausea, the feeling of or desire to vomit, and vomiting are common symptoms associated with many vestibular disorders, including Labyrinthitis/Vestibular Neuritis. These symptoms are often due to other precluding symptoms such as vertigo and dizziness and often severely negatively impact the quality of life of patients.

Diagnosis and Treatment

Medication

Med-bottle

Medical treatment regarding Labyrinthitis/Vestibular Neuritis is heavily dependent on the condition's primary cause. Antivirals or antibiotics may be prescribed depending on if the cause is due to viral infection or bacterial infection. In addition, doctors may prescribe medications to suppress the vestibular system to reduce acute symptoms. Once physical therapy interventions start, vestibular suppressants should be stopped because they may impair vestibular compensation during habituation exercises.

Vestibulo-Ocular Reflex (VOR)

Vest-bull Eye Reflex Hammer

The Vestibulo-Ocular Reflex (VOR) exercises aim to help reduce symptoms of nystagmus and oscillopsia by training the eyes to move around and focus on various objects without eliciting symptoms. These exercises can range from moving the eyes between multiple numbers as quickly as possible to training the peripheral vision to pick up as many objects as possible without focusing too hard and causing symptoms.

Postural Control & Balance Training

Posture Controller and Balance-beam Training-wheels

Physical therapists will often target improving balance and posture to help reduce fall risk in patients with Labyrinthitis/Vestibular Neuritis. These exercises aim to aid patients in maintaining balance with work and personal-related activities, including things such as balancing on different types of terrain or surfaces. This might include balancing with eyes open on a firm surface and then transitioning to a softer surface, such as foam, with the eyes closed.

Gait Training

Gate Training-wheels

Gait training involves careful analysis and correction of gait patterns to aid in the compensation of the impaired vestibular system. Physical therapists may focus on strengthening the trunk and core muscles to aid in postural stability and maintain an upright stance during acute vestibular attacks such as with Meneire’s Disease. Patients will often be trained to rely more on vision and their somatosensory system to aid in maintaining balance and self-correcting to overcome the impairments of the vestibular system. These exercises may include walking in place with eyes open and then progressing to eyes closed, walking straight while turning the head left and right, and walking backward or sideways.

Habituation Exercise

Habitat-creation Exercise-machine

Habituation exercises include maneuvers such as the Epley, Brandt-Daroff, and Dix-Hallpike, which aim to gradually desensitize patients to symptoms such as vertigo and dizziness. In these exercises, the physical therapist may put the patient in positions that elicit symptoms and then cease the movement of the patient temporarily to allow for the symptoms to subside. The therapist will repeat these exercises over the course of several sessions, with many patients noticing a decrease in the intensity of symptoms over the course of time. Once taught, patients are able to perform these exercises on their own without a therapist.

Sign up for FREE at picmonic.com