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by Orthopedic & Sports Physical Therapy Associates, Inc.,
OSPTA@Home and Valley Outpatient Rehabilitation

Vestibular and Balance Rehabilitation

Introduction

Many people suffer with dizziness and/or balance disorders. Common complaints include unsteadiness, dizziness, lightheadedness, motion sickness, sense of tilting, vertigo, oscillopsia (jumping of vision), and frequent falls. The human body's balance and equilibrium are controlled by three systems working together. They are visual, vestibular, and proprioceptive systems (muscles and joints). Information from these three systems gets taken up to the brain where it is processed and then sent back out to the body for the appropriate response. When there is a disruption in any of these systems problems begin to develop. Another cause of disorders can be due to a problem in the brain. These types of dysfunctions can greatly affect a person's day to day functioning, ability to work, social relationships, and quality of life.

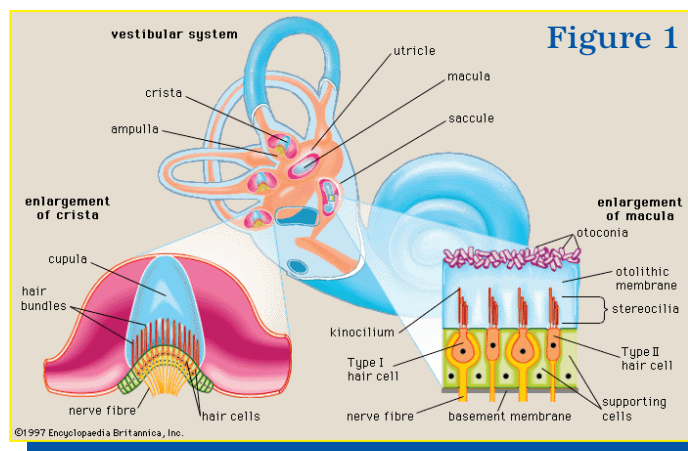
Types of Disorders

Benign Paroxysmal Positional Vertigo, BPPV – BPPV is the most common cause of vertigo and women tend to be more commonly affected than men. This disorder occurs when small crystals called otoconia become dislodged from their normal place and float into one of the semicircular canals (see Figure 1). Patients tend to experience dizziness that usually only lasts a few seconds to two minutes and occur when the person assumes certain head positions. This could include bending over,

lying down in bed, rolling over in bed, sitting up and looking up. Patients may also feel imbalance when this is occurring.

Vestibular Neuritis – This is the second most common cause of dizziness and occurs when there is a problem with the nerve that controls the vestibular system (Cranial Nerve X, Vestibulocochlear). The symptoms are believed to be from an inflammation of the nerve possibly from a virus. The affected person will initially have a severe bout of dizziness, nausea, and/or vomiting that may last for 24 to 72 hours, which is exacerbated by head movement, and imbalance. There will then be less severe dizziness that continues to be exacerbated by head movements. Hearing is preserved.

Labyrinthitis – This disorder is similar in nature to vestibular neuritis with the difference being



that the patient will also lose hearing in the affected ear.

Bilateral Vestibular Hypofunction/Loss - This disorder occurs when loss of function occurs in both ears. This is sometimes due to age because as we age we lose hair cells in our inner ear. This can also occur due to heavy dose antibiotics or certain drug therapy for cancer, autoimmune diseases, congenital malformations, or bilateral neuritis. Vertigo is not typically a complaint with this disorder, but the patient will have disequilibrium, oscillopsia, loss of balance and altered ambulation.

Meniere's Disease - Typical symptoms of Meniere's Disease include a decrease in hearing, feeling of fullness in the ear, tinnitus (ringing of the ear), vertigo, imbalance, and possible nausea and vomiting. The initial symptoms typically last anywhere from 30 minutes to

24 hours and then slowly begin to decrease. Hearing usually comes back, but not always to the full extent. As the disease progresses more hearing may be lost each time, but the severity of the vertigo may decrease.

Migraine - When patients have dizziness related to Migraines they typically describe vertigo, dizziness, and/or motion sickness. The spells usually last minutes at a time. The patient may or may not have a headache with the other symptoms. Symptoms are usually exacerbated by television or computer monitors or while a passenger in a moving car.

Cervicogenic Dizziness - This disorder typically occurs in conjunction with neck pain and complaints include feeling dizzy, lightheaded, and/or a sense of the head not being connected to the body. The patient may also have complaints of dizziness while reading.

Central Disorders - These types of disorders occur when there is insult to the brain and/or spinal cord. They can vary widely in presentation of symptoms and include diplopia (double vision), oscillopsia, Lateropulsion (feeling of being pushed to one side), altered consciousness, vertigo, ataxia, imbalance, and hearing loss. Varying conditions can cause these symptoms. Some examples include; Multiple Sclerosis, Traumatic Brain Injury, Post-concussive Syndrome, certain types of tumors, infarcts due to vascular disruption, and degenerative changes.

Treatment

Medical

If a person begins to experience any of the above mentioned symptoms they should make an appointment to see their medical doctor immediately. If appropriate, the doctor may prescribe some form of medication to help control the symptoms. Meclizine is one of the most common anticholinergic drugs prescribed which will help to decrease the dizziness. Another type of medication, such as Promethazine, may be given to decrease the nausea. If the problem is due to an acute Vestibular Neuritis or Labyrinthitis and it is diagnosed early a short dose of Prednisone or



Figure 2





OSPTA, Inc.
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NEWS *briefs*

OSPTA would like to thank Ms. Dana Shaffer, DPT for her contribution to the newsletter, and would like to congratulate Ms. Carrie Pazeowski, DPT, Ms. Victoria Bennett, PTA and Ms. Andrea Conrad, PTA for successfully passing their state licensure examination.

Women's Health evaluation and treatments are offered at Rostraver Valley Outpatient Rehabilitation (VOR) and at Washington OSPTA. Additional information on Women's Health treatments can be obtained by contacting Ms. Martha Patterson-Avery, DPT at the Rostraver location or Washington location.

Evaluation and treatment of Lymphedema is performed at OSPTA, Belle Vernon by Ms. Lori Baumann, DPT and Ms. Kelly Pendo, PTA. Please call the Belle Vernon office to setup an appointment.

OSPTA opened a new office in North Versailles on June 26, 2010 and is currently being managed by Mr. Nick Sivrich, DPT.

OSPTA would like to remind everyone that home health visits can be performed through



Available services are:

- Physical Therapy
- Occupational Therapy
- Speech Therapy
- Nursing
- Home Health Aides
- Social Services

Belle Vernon	724-929-5774
Bethel Park	412-835-2259
Brownsville	724-785-5262
California	724-938-0310
Carmichaels	724-966-2709
Carnegie	412-279-7700
Charleroi	724-483-4886
Clairton/ Jefferson Medical	412-466-8811
Connellsville	724-626-3320
Elizabeth *(Hand Center)	412-751-0040
Farmington	724-329-4723
North Huntingdon	724-864-4410
North Versailles	412-824-0910
Perryopolis	724-736-7415
Uniontown *(Hand Center)	724-439-6294
Upper St. Clair/ Mt. Lebanon	412-276-6637
Washington	724-223-1207
Waynesburg *(Hand Center)	724-852-2504
White Oak	412-672-2352

The Hand Center Monongahela 724-483-4263

OSPTA@Home 724-483-4859

Valley Outpatient Rehabilitation Monongahela:	
Country Club Road	724-258-6211
Residence at Hilltop	724-292-1229
Rostraver	724-379-7130
Speers	724-489-8111