

Vestibular Rehabilitation

Snehal Joshi*

*DES Brijlal Jindal College of Physiotherapy, Pune, Maharashtra, India

Description

Vestibular rehabilitation is a therapy to reduce the symptoms caused by vestibular dysfunction. The functional impairments seen in vestibular dysfunction are dizziness, nystagmus, and loss of balance leading to falls. Hence this therapy includes corrective exercises, habituation exercises, gaze stability exercises.

Recent researches show that vestibular rehabilitation is effective in cases associated with dizziness. Few clinicians do find them to have small effect with few exceptions like BPPV. For vestibular rehabilitation to gain expected results it is necessary to have an accurate diagnosis.

Indications for vestibular rehabilitation are Benign paroxysmal positional vertigo-it requires specific interventions. The main cause for BPPVs is either cupulolithiasis or canalithiasis. Unilateral loss acoustic neuroma, vestibular neuritis, and bilateral loss. In cases with intermittent symptoms like Meniere's disease the role of rehabilitation can be limited to making the patient aware so as to avoid or desensitize it. Motion sickness or motion sickness on getting down from boat (known as Mal de débarquement) traumatic brain injury, psychogenic vertigo can be indicated although interventions can be different. Other conditions which cause dizziness like hypotension, migraine and TIA are not benefitted.

Caloric testing, rotary chair, Haalpike Dix manoeuvres used for diagnosis of BPPV. Balance assessment scales like time up and go test, DGI are common outcome measures used in case of vestibular dysfunction. There are many processes that might be usefully influenced by experience and motion: Plasticity changes in central connections to compensate for peripheral disturbances. Although it was postulated that older persons adapt less well than younger, a recent study concluded that there is no difference in effect of vestibular rehabilitation according to age.

Formation of internal models, a cognitive process where one learns what to expect from one's actions. Internal models are critical for anticipation, which is essential when one is controlling systems that have delays. Much of the benefit of vestibular therapy may depend on internal models. A recent study showing recovery of better vision in persons with bilateral vestibular was attributed to "centrally programmed eye movements".

Learning of limits is another cognitive process involved with learning what is safe and what is not. Someone who does not know their limits may be overly cautious and avoid dangerous situations.

Sensory weighting is a cognitive process in which one of several redundant senses is selected and favored over another. Usually prioritization

occurs between vision, vestibular and somatosensation inputs when one is attempting to balance. People with fluctuating vestibular systems, such as those in Meniere's disease, sometimes seem to be unable to switch off their visual reliance, causing them distress in certain situations where vision is an incorrect reflection of body movement.

Habituation is one of the common and oldest "general" interventions for vestibular problems were the Cawthorne-Cooksey exercises, that progress from simple head movement to complex activities such as throwing a ball.

BPPV manoeuvres is Epley (canalith repositioning) and semont manoeuvre (cupulolithiasis), Brandt-Daroff exercises, log roll exercises are effective for BPPV. Moving away from routine therapy in the clinics recreational activities which involve movements of head and eye like racquet games, stick ball games can be effective.

Gaze stability exercises are effective in improving VOR which is affected in individuals with vestibular dysfunction. Along with routine balance training which involves reducing the base of support and changing the center of gravity, head turns in standing, turning walking, balance training using foam dome method, also reducing patients' dependency on vision is found to be effective. Aerobic conditioning may play an important role as the patient becomes inactive due to movement phobia.

Virtual reality, reducing somatosensory dependence could be other measures for reducing the symptoms. Deep breathing and proprioception exercises were found to be effective in reducing dizziness. Few clinicians do recommend axial loading. Habituation exercises do play a key role in motion sickness.

In case of acute exacerbation of symptoms the treatment should be stopped and commence when the symptoms subside. One of the researchers that exercises should be done without glasses as glasses might provoke the symptoms. While treating the patient, safety precautions like standing near the wall or support should be practiced.

Vestibular rehabilitation therapy can be effective if used with correct diagnosis and thereby intervention.

How to cite this article: Joshi S. "Vestibular Rehabilitation". *Physiother Rehabil* 5 (2020) doi: 10.37421/jppr.2020.5.188

*Corresponding author: Snehal Joshi, Education department, Dubai Health Authority, Dubai, Dubai Hospital, United Arab Emirates, Tel: +91 9822490291; E-mail: drsnehalmandke@gmail.com

Received date: July 25, 2020; Accepted date: July 28, 2020; Published date: July 31, 2020

Copyright: ©2020 Joshi S. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.