



VESTIBULAR DISABILITY: THE ROLE OF VESTIBULAR REHABILITATION FOR PATIENTS WITH MENIERE'S DISEASE OR MENIERE'S SYNDROME

Professor Margie H Sharpe PhD
Dizziness & Balance Disorders Centre, Adelaide, South Australia
www.dizzinessbalancedisorders.com.au

Vestibular disability arises from disorders of the vestibular system, Meniere's disease and Meniere's syndrome, being such disorders. Both of these disorders involve the peripheral vestibular system located in the inner ear. The primary symptoms of vestibular disorders are vertigo, blurred vision, oscillopsia, disorientation, gait ataxia, disequilibrium, nausea, vomiting, sweating, increased heart rate and respiration. Secondary symptoms are fatigue, headache, poor concentration, short term memory loss, muscle weakness, cardiovascular de-conditioning, unable to read street signs and recognise people's faces, fear of falling, fear of a driving accident, falls and related injuries, changes or modifying employment, difficulty moving in darkness - cinema, imbalance in busy visual environments -the supermarket and crowds, socio-economic issues, social embarrassment, decreased physical activity, decreased independence in self-care, job performance and participation in family life and reluctance to participate in social and recreational activities. Together, these symptoms lead to decreased independence, employment and economic issues, social isolation, depression, diminished self-confidence and self-esteem, and interpersonal relationships being affected. This inter-relationship between symptoms and disability is not to be underestimated and has far reaching consequences for both the patient and family.

Vestibular rehabilitation therapy plays a critical and very important role in patients with Meniere's disease or Meniere's syndrome. Numerous studies have reported the beneficial effects of appropriate vestibular exercises for these clinical populations.

This type of therapy has been shown to improve balance, gait and dynamic visual acuity, prevent falls and related injuries, increase the individual's independence, and improve self-care and activities of daily living. Therefore, Vestibular therapy may ameliorate the disabling effects of vestibular impairment, thereby decreasing vestibular disability.

Vestibular therapy may be administered after a vertiginous episode, in conjunction with medication, before and after inner ear surgery such as endolymphatic surgery or vestibular neurectomy or gentamicin treatment. Therefore, a multi-disciplinary approach is paramount. The Vestibular physiotherapist needs to communicate with the patient's Ear, Nose and Throat specialist and General practitioner (and other health professionals if involved) to ensure the best clinical outcomes for the patient.

The precise nature of the Vestibular rehabilitation programme is contingent upon the assessment findings of each patient. It must be modified and/or progressed according to the each patient's needs. These needs will be related to the stage of the disease, type of medical intervention and other co-morbidities. The selection of the appropriate vestibular exercises is based on the type of vestibular loss, the patient's symptoms and functional abilities. For example, an exercise programme may foster adaptation of the vestibular system when the patient has unilateral loss or hypofunction. In the case of bilateral vestibular hypofunction, substitution of alternative strategies or enhancing function may be prescribed. Patients may also require an aerobic and/or progressive muscle-strengthening programme for cardiovascular de-conditioning and muscles weakness, respectively.

In summary, based on an understanding of vestibular physiology, the pathophysiology of Meniere's disease and Meniere's syndrome, the balance system and normal functional abilities, appropriate vestibular rehabilitation strategies are beneficial to these patients; improving their balance, gait, dynamic visual acuity, preventing falls and related injuries, increasing their independence, and improving their daily function and functional abilities. Vestibular rehabilitation therapy may remedy the disabling effects of vestibular impairment, thereby decreasing vestibular disability in these patients.