

Diseases of the Inner Ear

Vertigo, Imbalance Disorders or Dizziness

In our office we are focused on both physical examination and laboratory evaluation to deal with these various types of disorders. It should be noted that many different underlying causes may manifest similar symptoms in this particular disease process, more so perhaps than in others. Careful historical information, accompanied by physical examination and laboratory evaluation are necessary to fully undertake the care of patients with balance disorders. This is because balance disorders are a manifestation of a multi faceted complex system. This system involves the central nervous system, the peripheral input generated by the ear system for balance, the ocular system, the peripheral perception system that includes information from the neck cervical muscular and vertebral areas, the peripheral distal nervous input of proprioception (feeling), in particular involving the ankles as well as the knees and the trunk musculature itself. In this system both cardiologic and other seemingly unrelated systemic disorders may also result in symptoms of dizziness or imbalance. It is important to have a fundamental knowledge of these systems in order to assess each individual patient.

At Lakeshore ENT the resources exist to accomplish this form of evaluation. This enables the physician to plan the form of therapy best suited for each individual patient. This may involve not only the otologist evaluating the patient, but also neurophysiologic testing and referrals to physicians specializing in cardiovascular disease processes or neurological disease processes. When visiting our office for consultation it is particularly important to take time to focus attention on the symptomatology that is outlined in our

laboratory evaluation questionnaire booklet. This permits a focused thought process on the part of the patient, which then enables the physician to gain a clearer picture of various aspects of the balance disorder. Focusing on this truly permits the assemblage of a coherent picture. That in turn permits either medical or surgical therapy as needed for the particular disorder. The particular diagnostic possibilities will be discussed on this web site at varying times in order to educate the reader. Again, without a clear initial diagnostic picture, therapeutic intervention, be it medical through dietary change, medications, or vestibular therapy, cannot be appropriately applied. In addition certainly the potential intervention of a surgical nature is best applied only when necessary and likely to be of benefit to the patient.

Benign Paroxysmal Positional Vertigo

This particular disorder is a very interesting one which has evolved in its clinical understanding over the last 25 years from a diagnostic dilemma of sorts, into a disorder which is now quite readily treated in over 95% of people. **Benign paroxysmal positional vertigo** appears to arise in most persons because of loose particles within the inner ear fluid compartment. These loose particles may be mere debris or may be loosened calcium type crystals which are normally present in one portion of the inner ear. When they are loosened, occasionally they will take up a position within the small canals for balance, in particular occurring in the posterior or lower positioned semi circular canal, thus stimulating that canal to respond to gravity. Normally these semicircular canals respond to angular acceleration not to gravity. With the presence of a particle inside of that small canal, certain positions will evoke a sudden onset, short lived burst of input activity. This

causes a rhythmic motion of the eyes, which will give you the sensation of rotation or motion. It is very disconcerting, can be quite severe, but lasts for an extremely short period of time.

It has been shown that these particles can be repositioned out of the canal back into the center of the labyrinth where they will commonly stick or stay. A maneuver is done that is variably named **Epley**, **modified Semonts** or **repositioning** maneuver. This is a slow rotation involving both the head and the body. Once repositioning is completed, the patient, by necessity, is to remain in an upright position for 2 days and 2 nights. This is in order to permit sufficient time to elapse for the particles to stick in their non-symptomatic position.

Certainly a person may have a recurrence at a later date, but few diseases offer treatment with such potential for a miraculous recovery. There are some patients whose problem may involve other canals or may not properly respond to the above treatment. In such cases other treatments may be necessary. However, the above scenario is by far the most common type of positionally induced vertigo.