

Balance and Vestibular Treatments Provided

- Advanced computerized Neurocom balance equipment provides a variety of retraining exercises for deficits found during the evaluation
- Balance retraining to improve the coordination of muscle and joint responses with input from the eyes and inner ears
- Canalith repositioning maneuvers: removing deposits from a patient's semi-circular canal by moving the patient's head in a sequence of positions



- Vestibular adaptation, habituation, and substitution exercises to improve the brain's ability to interpret the input from the inner ear
- Stabalon Vibration Balance Belt to restore equality of gait pattern and provide additional sensory information for balance and gait
- Gait training, including recommendations for an appropriate assistive device if needed
- Range of motion, strengthening, and endurance exercises of the trunk and extremities with a full range of aerobic and weight training equipment

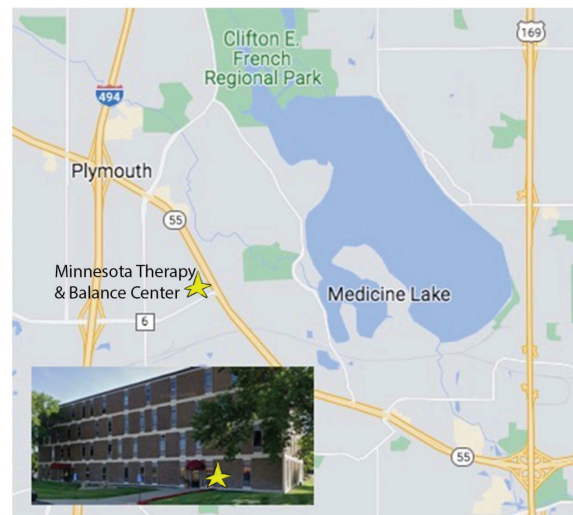


Goals for Therapy

- Decrease dizziness
- Reduce the risk of falls
- Improve balance and postural control
- Improve the ability to walk
- Recommend appropriate walking aid if needed
- Remove debris from semi-circular canals to alleviate benign paroxysmal positional vertigo
- Increase dependence in activities of daily living

Specialized Parkinson Programs

- LSVT® BIG for Parkinson's Disease
- Boxing for Neuro Retraining



BALANCE AND VESTIBULAR REHABILITATION PROGRAM



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Conditions which can benefit from Vestibular Rehabilitation

- Benign Paroxysmal Positional Vertigo (BPPV): Calcium deposits (often called crystals or rocks) break off from a bone in the inner ear and fall into one of the semi-circular canals. Symptoms include spinning sensations for a few seconds after specific movements such as getting in and out of bed or looking up and down.
- Vestibular neuritis: an infection of the vestibular nerve contributing to dizziness and imbalance
- Ototoxicity: toxic damage to the inner ear such as from certain medications
- Recovery after acoustic neuroma removal: benign tumor of the nerve from the brain to the ear
- Central or neurological vertigo: problems in the balance centers of the brain from
 - stroke
 - head injury/concussion
 - multiple sclerosis
 - seizure disorders
 - brain tumors or cysts
 - cerebellar dysfunction
 - migraine
- Long term effects from Ménière's Disease
- Motion Sensitivity
- Other conditions of the ear resulting in problems with dizziness and balance



Balance

We maintain balance with input from our eyes, inner ears, and muscle and joint receptors in our bodies. This input is processed in a part of the brain called the cerebellum, which uses this information to tell us where we are in space. If any of these inputs becomes damaged, we may become unsteady or dizzy.



Conditions which can benefit from Balance Retraining

- Peripheral neuropathy such as from diabetes
- History of falls
- Ataxia: difficulty coordinating movement
- Decline in quality of gait such as from Parkinson's Disease or from a prolonged hospital stay or illness
- Abnormalities of the upper cervical spine
- Trunk or lower extremity weakness

Balance and Vestibular Evaluation

- **Computerized Dynamic Posturography** with Neurocom Smart Equitest
- **Computerized Dynamic Visual Acuity and Gaze Stabilization Evaluation** with Neurocom inVision Equipment
- **Computerized Gait and Weight Transfer Evaluation** with Neurocom Long Force Plate
- **Oculomotor Assessment** to evaluate eye movements in various positions and with infrared Vestibular First goggles
- **Dynavision Hand Eye Coordination Assessment**
- **Assessment** of gait, posture, muscle strength, range of motion, tone, and sensation



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- BS in Biology from St. Olaf College, 1998
- Masters of Science in Physical Therapy from Washington University School of Medicine, 2000
- Doctor of Physical Therapy from Washington University School of Medicine, 2005
- Clinical practice since 2001 with extensive education in vestibular rehabilitation, balance retraining, neurological conditions, spinal pain, headaches, muscle imbalances, and orthopedic conditions
- Certified in Vestibular Rehabilitation
- Certified in LSVT® BIG for Parkinson's Disease
- Certified Ergonomic Assessment Specialist
- Certified in Tai Chi for Health