

The *inVision*™ System

Throughout everyday activities, the head and body move continuously, and because of this, it is imperative that vision remains stable. This visual focus, primarily controlled through the Vestibulo-Ocular Reflex (VOR), stabilizes images on the retina while the head and body are moving with activity. Often, patients who report blurred vision or dizziness while performing activities are found to have a dysfunction of the VOR.

The *inVision*™ system, used as part of Marianjoy's Balance and Vestibular Center, enables physical therapists, specially trained in vestibular rehabilitation, to quantify how severe the VOR dysfunction is and to qualify the direction of the head movement that is most problematic.

Diagnostic groups often seen with VOR dysfunction include:

- Post-concussive
- Traumatic brain injury
- Labyrinthitis
- Vestibular neuritis
- Acoustic neuromas
- Certain types of strokes

The Evaluation

The specially designed *inVision*™ headwear is equipped with sensors that can record the speed and the direction of head movements.

The evaluation begins by testing visual acuity with the patient's head stationary. The patient is then instructed to focus on a moving target. As the head moves in different planes, attempting to focus, the visual acuity is tested again. These results are then analyzed through the *inVision*™ computer software to determine the speeds of head movement at which the patient is correctly identifying targets. Those speeds are then compared to data that reflects the standardized norms required for various activities. Using both the Gaze Stabilization Test and the Dynamic Visual Acuity Test, the clinician can then determine the patient's level of function or impairment with regards to their visual acuity.

Using this information, therapists design specific exercises, called adaptation exercises, which help to address the particular dysfunction. These exercises have been proven to resolve issues with gaze stabilization and allow a patient to return to a higher level of function.



MARIANJOY

Assistive
Rehabilitation
Technology Institute

The **Marianjoy Assistive Rehabilitation Technology Institute** offers solutions to everyday problems of daily living encountered by individuals with disabilities. The Institute consists of seven distinct centers which apply advancements in technology to benefit individuals with disabilities through maximizing functional independence, as well as expanding educational, vocational, recreational, and communicative opportunities.

- **Assistive Communication and Daily Living Center**
- **Balance and Vestibular Center**
- **Driver Rehabilitation Center**
- **Gait Analysis and Mobility Center**
- **Prosthetic and Orthotic Center**
- **Swallowing and Voice Center**
- **Wheelchair and Positioning Center**



To make an appointment or
for more information, call

630-909-7150

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