

Physician's Guide Dizziness and Balance Disorders



Balance



TM

EAR, NOSE & THROAT
ASSOCIATES, P.C.

Practicing Excellence.

Setting the Standard.

Reference for Physicians

ENT Balance provides comprehensive diagnostic evaluations and the latest in treatment techniques so that patients do not have to simply “live with” vertigo or other balance problems. We combine a team approach, years of medical training and experience, and the most advanced technology to provide the best possible care for pediatric, adult and geriatric patients. We are dedicated to working with you as part of the team in caring for your patient.

The Indications for Balance Care

A variety of medical conditions can cause vertigo and balance symptoms. Most are self-limiting. After an initial evaluation to rule out cardiac or neurological disease, most patients with an acute first-onset “inner ear” disorder recover with only symptomatic treatment. Those patients who have recurring symptoms, or whose symptoms do not resolve within 6 weeks of first onset, can benefit from a diagnostic evaluation at ENT Balance. Patients who suffer a sudden hearing loss should be referred emergently to otolaryngology services in order to maximize the chances for hearing recovery.

Diagnosis

In order to reach an accurate diagnosis, the medical information you provide to us will be fully reviewed, and a detailed history taken. When indicated we can perform the appropriate diagnostic tests including audiometry, radiographics, laboratory studies and **balance testing**. These tests help us to identify the site and extent of central or peripheral injury, assess the patient’s functional capabilities and risk for falls, and determine the best course of treatment.

Balance Testing

Balance Testing evaluates the senses which contribute to balance (vestibular system, vision and proprioception), the central nervous system’s integration of the sensory inputs, and the functional

output of the balance system, our ability to stand and walk. The **balance testing report** describes the site and extent of peripheral and central vestibular system injury, functional deficits, environmental risk for falls, differential diagnoses, and recommendations for treatment. This non-invasive testing may include some or all of the following sub-tests.

Description of Balance Tests

Video nystagmography (VNG)

The traditional test for vestibular lesion is made more sensitive by utilizing tiny infrared video cameras to record eye movement patterns. VNG records and analyzes nystagmus when the vestibular organs are at rest, and when stimulated by headshaking, changing head position relative to gravity, or thermally with caloric irrigations.

Rotation Tests

The center's use of both **Rotary Chair and the Vestibular Autorotation Test (VAT)** is unique in the state. These tests greatly increase our ability to detect subtle vestibular abnormalities by utilizing natural motion across a wide range of frequencies and acceleration rates. They also allow us to evaluate central nervous system integration, and to test patients who cannot tolerate the caloric, such as small children.

Ocular motility

The central vestibulo-ocular pathways are strictly examined by recording the speed and direction of eye movements during saccade, pursuit, and gaze tasks. The patient's performance is compared to age and sex-matched norms for accuracy, speed, timing, and conjugacy.

Postural Control

Postural control, as well as the ability to integrate and utilize information from vestibular, vision and proprioception, are evaluated with a **computerized dynamic posturography (CDP)** platform, which is new to the region. CDP measures the patient's response to sudden destabilizing movements and to environmental changes to the visual world and the floor's surface. This helps us determine the risk for falls and design effective treatment programs. Should the response patterns suggest possible central or spinal lesion a "functional EMG" test,

which records leg muscle activity during active stance on the platform, can aid in localization and diagnosis.

Treatment and Rehabilitation

Treatment of balance disorders varies by diagnosis and symptoms, and can include any combination of dietary changes, medication, surgery and/or Vestibular Rehabilitation Therapy. Our team will work together with you to develop a treatment plan to meet your patient's individual needs.

Vestibular Rehabilitation Therapy (VRT)

VRT has achieved widespread success in recent years. A customized and individually tailored balance exercise program is designed by a **balance therapist** (a physical therapist with advanced training and proven competency) VRT is appropriate to treat those symptoms which are provoked by movement and activity, it has no effect on spontaneous attacks of vertigo, though it is often useful as an adjunct treatment to reduce motion-provoked symptoms which may persist between spontaneous attacks.

VRT exercises both desensitize the balance system to movements which provoke symptoms, and facilitate the natural process of compensation for injury to the vestibular system. (A customized VRT exercise program is designed by the therapist and taught to the patient, who can usually perform them at home. Regular followup visits to the therapist are scheduled to assess progress and make changes to the program.) VRT programs typically last 4 to 8 weeks, including 2 to 4 visits with the therapist. A small number of patients will receive treatment for a longer period of time, and may work directly with the therapist in order to improve gait and reduce risk for falls.

Benign Paroxysmal Positional Vertigo (BPPV)

BPPV is the single most common cause of episodic vertigo. BPPV can now be treated by a 15 minute office procedure, the **particle repositioning maneuver**, performed by the balance therapist to move free-floating debris out of the affected semicircular canal. The literature reports an 80-90% success rate when this procedure is performed by a trained specialist. Many patients with BPPV also have unsteadiness or other symptoms which might require a full VRT home exercise program.

A Team Approach

The ENT Balance team includes professionals with skills in neurotology, audiology, balance diagnostics, and balance therapy. Our approach is modeled after balance programs found at large teaching hospitals. It combines feedback and collaboration among various disciplines within the ENT Balance Team and the referring doctor, in order to maximize patient care.

Thomas E. Boismier, MPH, is Director of the Balance Care Center. Prior to joining ENT Associates in 1997 to develop the center, he spent 10 years as the assistant director of the Vestibular Testing Center at University of Michigan. He has an extensive clinical and research background in vestibular science. He has taught balance testing to professionals nationwide and abroad, including a teaching secondment in Addenbrooke's Hospital at Cambridge University in England.

Nancy E. Sholl, PT, is our Chief Balance Therapist. She has both practiced and taught balance therapy techniques for many years. All of our balance physical therapists have advanced training and practice exclusively in this specialized field. All of our physical therapists have earned a competency certificate in vestibular rehabilitation therapy from a nationally recognized training program.

Patient Referrals

The Balance Care Center is an open-referral service, which means that doctors can refer their patients for any combination of diagnostic testing, medical consult or balance therapy. To schedule an appointment, or to learn more about our services, please call our office at (260) 426-8117, ext 238.

Ear Nose & Throat Associates, PC

Ear, Nose and Throat Associates, P.C., is a medical practice of board-certified physicians and surgeons specializing in otolaryngology medical care and surgery. Whether we are treating children or adults, our approach is one of care and concern for the patient. Our staff of licensed clinicians and experienced office professionals are committed to you and your health.



Our Physicians

William M. Culp, MD
John E. Westfall, MD
Thomas W. Dumas, MD
David W. Stein, MD
John H. Fallon, MD
Mohan K. Rao, MD
Cynthia L. Wellman, MD
Douglas A. Nuckols, MD
Thomas W. Herendeen, MD
Stephen J. Schreck, MD
Deepkaran K. Reddy, MD
Amy L. Lai, MD
Adam R. Kaiser, MD
Brian D. Herr, MD

Nurse Practitioners:

Valerie Stucky, RN, FNP, MSN
Julie Hall, RN, FNP, MSN

Our Office Locations

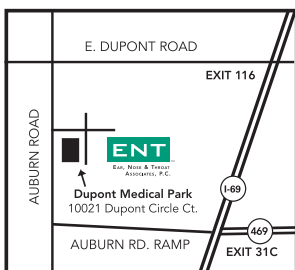
With a variety of office and clinic locations throughout the region, we are here to meet your needs.

Dupont Office

(CT Scanner location)
10021 Dupont Circle Ct.
Fort Wayne, IN 46825

Lutheran Medical Park

7926 W. Jefferson Blvd.
Fort Wayne, IN 46804



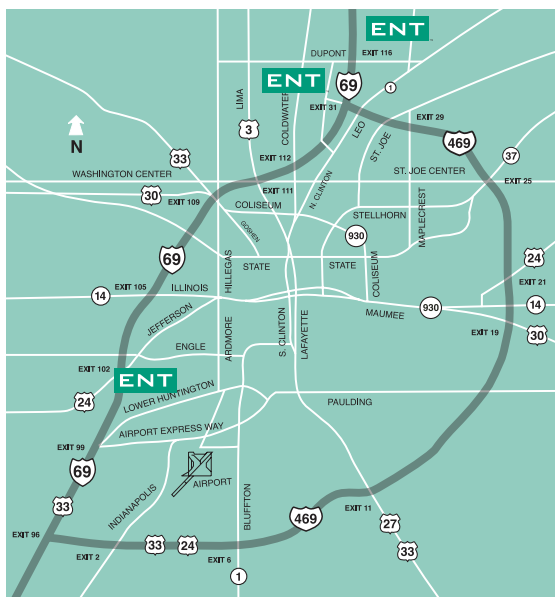
Parkview North Campus

11141 Parkview Plaza Dr.
Building 3, Suite 210
Fort Wayne, IN 46845

ENT Surgery Center

7900 W. Jefferson, Bldg. 1, Suite 102
Fort Wayne, IN 46804

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