

News

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****Exercises help correct, control
inner ear balance problems

DALLAS--There's new hope for patients whose balance disorders have not responded to conventional drugs or surgery. Using specially designed exercises and computerized equipment, The University of Texas Southwestern Medical Center at Dallas's Department of Otorhino-laryngology is helping people who suffer from extreme vertigo or dizziness through physical therapy.

Up to 20 million Americans are afflicted by severe balance disorders, and fewer than half can be helped by standard treatments. In the past these patients just had to live with their balance disturbance or with vertigo--the sensation that the world is whirling. Now the vestibular rehabilitation program begun by Dr. William L. Meyerhoff, professor and chairman of the Department of Otorhinolaryngology, offers a new alternative.

Meyerhoff and physical therapy instructor Patti Blau use a program of exercises to assist patients suffering from balance problems caused by disorders in the vestibular system, which includes the fluid-filled canals in the inner ear and affects balance. Opened in early September at Zale Lipshy University Hospital, the vestibular rehabilitation center is the only one of its kind in the Southwest and one of only a few in the nation.

Since balance is a complicated process involving many systems including vision, the vestibular system, the muscles and the joints,

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there are a variety of causes of balance disorders. A malfunction in any of these systems can cause balance problems. When a patient with a balance problem is referred to Meyerhoff, he conducts tests in his diagnostic laboratory to pinpoint the cause. Most commonly it is related to the inner ear.

Meyerhoff said vestibular rehabilitation is often a last resort for his patients, many of whom have seen a number of doctors and tried various treatments before being referred to the otolaryngology clinic at UT Southwestern. Some patients are excellent surgical candidates, but if the patient is a poor surgical candidate or if surgery has already been tried unsuccessfully, vestibular rehabilitation may be the only remaining answer.

If medicine and surgery on the inner ear can't correct the problem, Meyerhoff recommends physical therapy and sends patients to Blau. "Patients are evaluated and a customized program of exercises is developed to help 'teach' a patient's vestibular system to work for him again," Blau said.

The exercises are designed both to improve deficient systems and to compensate for systems that don't work at all. "We can improve the vestibular system if they're not using it correctly, or we can teach them to use other sensors to help balance," Blau said. One exercise uses a computerized device called a Balance Master to provide a visual reminder of movement. The Balance Master consists of a platform connected to a computer that shows how the center of balance shifts when the patient moves. Patients practice shifting their weight and leaning their bodies to follow a bouncing ball on the computer screen. In another exercise, Blau teaches patients to actually provoke

episodes of dizziness or vertigo, to help the brain learn to recognize input it receives from the vestibular system as "normal."

Meyerhoff developed the program out of concern for the plight of his patients. "These are sad people," he said. "Many are around 65, many are widows or widowers and they live alone. They can't go out to the grocery store because they're afraid to drive. Public transportation scares them to death. They become reclusive. At 65 they still have about 25 years of life expectancy, so to become reclusive that early is a catastrophic thing. These people deserve time, consideration, evaluation and every effort of treatment," he said.

The UT Southwestern program is too new to show statistical results. In other programs, approximately two-thirds of the patients have experienced significant improvement. Blau says she sees the program as beneficial, no matter what the statistical results show. "Even if it doesn't cure them, it improves the quality of life by making their symptoms manageable. No matter how you look at it they'll win," she said.

"It's an emotional and touching thing when an elderly woman looks at me with tears in her eyes and thanks me for giving back her life," Meyerhoff added.

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Note: The University of Texas Southwestern Medical Center at Dallas comprises Southwestern Medical School, Southwestern Graduate School of Biomedical Sciences and Southwestern Allied Health Sciences School.