Falls – An Ounce of Prevention Is Worth a Pound of Cure

By: By Derek Spinney, PT, CSCS Director of Rehabilitation Services Eisenhower Medical Center

The Balance Institute features the computerized SMART EquiTest — a dynamic apparatus that is capable of evaluating each of three balance systems.

Each year an estimated one-third to one-half of the population over the age of 65 experience a fall. Falls also account for 90 percent of hip fractures. Clearly, balance represents one of the most significant health issues for older adults. Fortunately, intervention prior to an incident can help prevent falls and the reliance on mobility aids that people often use when they feel their balance is unstable.

The Team Approach

Eisenhower Medical Center's Balance Institute utilizes a multidisciplinary team approach, assessment tools that isolate and quantify impairments within the individual components of a person's balance system, and proven methods of effective treatment.

The Balance Institute, located in the Dolores Hope Outpatient Care Center on the Eisenhower campus, features balance specialists who are specifically trained in using sophisticated equipment to identify deficits and impairments in balance. Balance specialists work collaboratively with the physician to establish a plan of care that addresses a patient's specific deficits. "A large number of our patients are referred by Ear, Nose, and Throat physicians," explains Lucian Ghioalda, MA, CCC-A, "but we do see a growing number of referrals to our program coming from primary care physicians, internists, neurologists, and other medical specialties as well."

The Balance System

A person's balance system is comprised of a complex relationship of three separate sensory systems: visual, somatosensory and vestibular, which all provide important and specialized input to the brain. For example, when stopped at an intersection, you might feel your car is moving backwards because you see other cars moving in your peripheral vision. The response is usually to press harder on the brake. Your visual system has signaled motion, which your brain initially interprets as you being in motion. The somatosensory system, through receptors in joints throughout your body, provides input that your body is not actually moving. When there is conflict between the visual and somatosensory systems, the vestibular system, located in the inner ear and brain, provides additional information so the central nervous system can resolve it. Initially your body perceives that the car is moving, but in a split second, the vestibular system will provide crucial input that helps your body react appropriately.

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A person's balance systems become less sensitive and effective with age, and a number of medical problems, including stroke, Parkinson's disease, diabetes, head injuries, infections, and other orthopedic and neurological conditions can affect these systems, resulting in instability, dizziness, and falls. The specialists at the Balance Institute can help identify which of these three systems needs attention.

Advanced Technologies

The Balance Institute features the computerized SMART EquiTest® — a dynamic apparatus that is capable of evaluating each of the three balance systems. Treatment is specific to each individual and often involves retraining these systems and developing compensations for factors that cannot be changed. Beyond initial evaluation, the SMART EquiTest system is often used for training and retesting to demonstrate progress. Balance Specialists will also assess joint mobility, strength and endurance, and integrate functional retraining to reinforce the improvements achieved.

"Patients who demonstrate improved results on their retest often report they are no longer having falls," says Celeste Blankenship, Physical Therapist. "They frequently report more confidence in their mobility, and they require less or no assistance with standing and walking activities."

Many patients have praised the clinic for providing a means of restoring function and quality of life. "Unfortunately, people often do not take advantage of this assistance until after they fall," says Florence Tse, Physical Therapist. "We would like to have a chance to intervene to prevent falls."

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