

# Balance and Vestibular Center

Programs to treat dizziness  
and reduce your risk of falling



**Dartmouth-Hitchcock**  
MEDICAL CENTER

# Helping you overcome dizziness and vertigo

Most people will experience dizziness at some point in their lives. Dizziness can occur at any age. It could be a sign of a serious medical condition so you should always discuss your symptoms with your primary care provider. Often, dizziness is a result of a vestibular disorder, that is, a disorder of the inner ear and its connection to centers in the brain. The vestibular system is responsible for sending information to your brain when your head moves quickly or you change positions. Problems in this system could cause you to be dizzy, lightheaded or woozy, or you may experience a spinning sensation known as vertigo. This dizziness can be effectively treated with vestibular therapy.

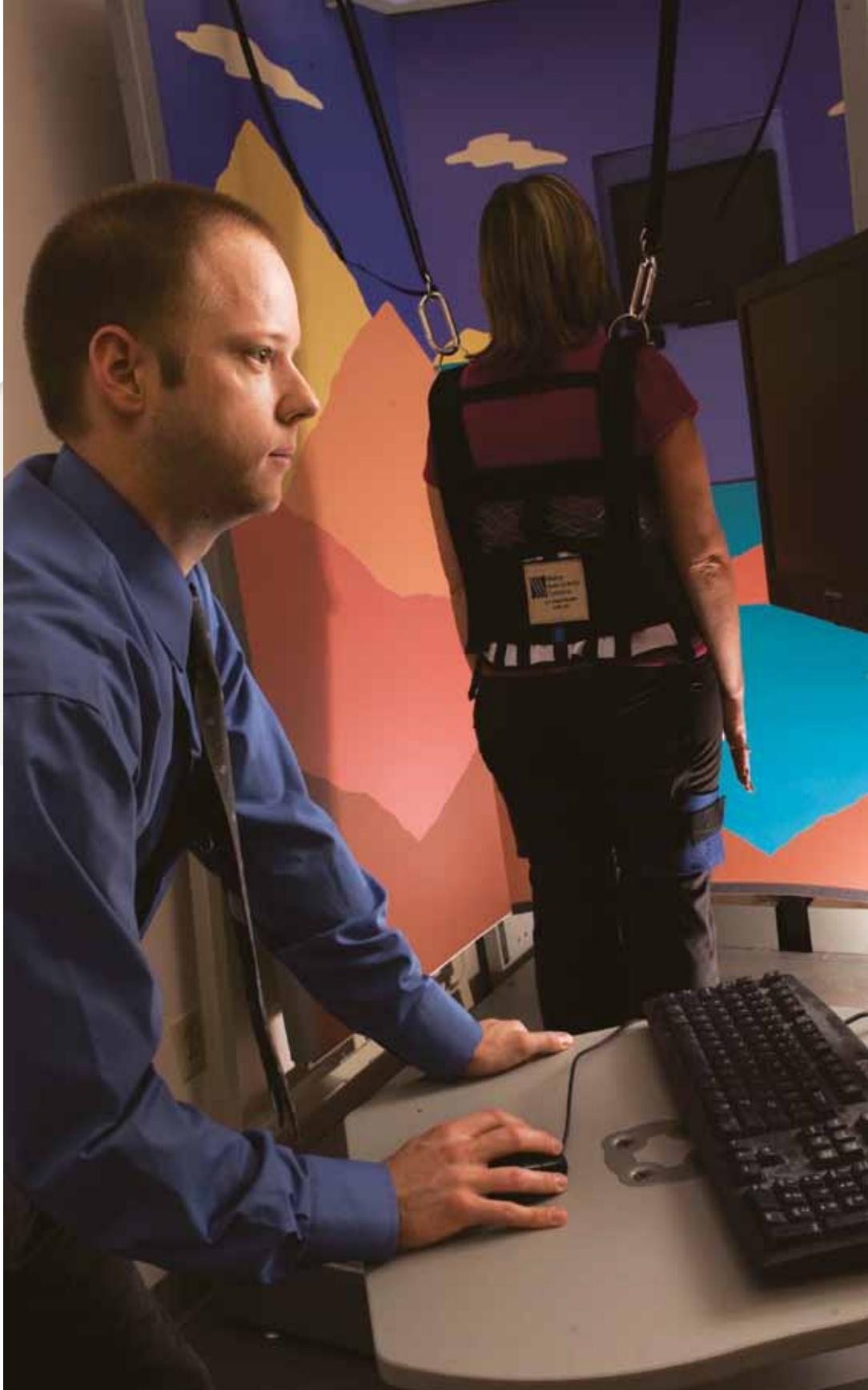


# Common causes for dizziness or vertigo

- Benign paroxysmal positional vertigo (BPPV)
- Labyrinthitis or vestibular neuronitis (from viral infections)
- Migraine-related dizziness
- Traumatic brain injury (TBI)
- Meniere's disease
- Acoustic neuroma (benign tumor on the vestibular nerve)
- Bilateral vestibular loss from ototoxic medications that can damage the vestibular system
- Unilateral vestibular hypofunction

Our physical therapists are specially trained to treat balance and dizziness related to these conditions, working closely with otolaryngologists and neurotologists (ear, nose and throat specialists), physiatrists, and neurologists. We perform a complete assessment including Platform Posturography Testing using the SMART Balance Master® EquiTest® — advanced technology to test a patient's balance. After our team completes a comprehensive assessment, we will determine the most appropriate treatment that may include:

- vestibular habituation and gaze stabilization exercises meant to help retrain the vestibular system
- balance exercises to improve steadiness with walking and standing activities
- Epley's canalith repositioning maneuver for BPPV — a technique that involves moving your head in specific directions to eliminate a spinning sensation when you move



# Improving your balance to avoid falls

Having proper balance means you are able to maintain your body's center of gravity (your lower trunk) over your base of support (your feet) as you stand and move. To maintain your balance, your brain gathers and processes sensory information from your eyes, inner ear (vestibular system), and feet. Muscles and joints in your body then respond to what your brain tells them to do. Deficits in any of the sensory areas, including numbness in your feet, dizziness, visual problems, decreased strength, decreased flexibility, or neurologic diseases in the brain, can cause unsteadiness, which can cause you to fall.

## Why falling is so dangerous and how we can help

- 30% of individuals age 65 and older will fall each year and 50% of those individuals will have more than one fall
- 50% of individuals age 80 and over will fall each year
- Those who fall may break bones and lose their level of independence; they may also become fearful of movement in general and decrease daily activities
- Falls are the leading cause of nursing home admissions, the fifth leading cause of death overall in individuals 65 and older, and the leading cause of death from injury

The good news is you CAN reduce your risk of falling and falling is NOT a normal part of aging!

Studies have shown the most effective means for reducing your risk of falling is called Multifactorial Intervention. This approach can reduce your risk of falling by at least 30%. Using this method, we will teach you balance and strengthening exercises and give tips on how to make your home safer. We will also make sure you are evaluated by the right professionals to review the medications you take and address the medical conditions that can cause unsteadiness and dizziness.

Our physical therapists who specialize in balance rehabilitation will perform a comprehensive evaluation that includes tests for strength, flexibility, balance, gait (how you walk), and the vestibular system. We will recommend a program that addresses your specific areas of deficit to decrease your risk of falling. We will also help you develop a plan to maintain the gains you make after you finish your physical therapy program, either through home exercises, community exercise programs or our weekly Wellness Program.

# When should you have balance therapy?

You should talk to your primary care provider about a referral to our Balance Program for an assessment if you have:

- fallen or been close to falling
- changed your normal activities because you are concerned about your balance
- experienced dizziness or unsteadiness

## Balance Therapy Program

After your Balance Assessment we will develop a plan with you. Often, people begin with one or two therapy sessions weekly to work on strength, balance, and flexibility.

Our team uses the latest equipment available, including the ActiveStep™ Fall Assessment and Fall Reduction System, a new technology in balance treatment that specifically targets improvement of slips and trips. It is similar to a treadmill except that you have a harness

and a belt around you to make sure you are safe as the machine makes quick starts, forward and backward, to simulate slips and trips. The motion helps your body learn how to balance better in these situations.

We also have a large gym with equipment for strengthening and balance training. A specialized mobile harness system is set up in an open area where you can walk and do exercises to improve your balance without falling.



# Quick Tips to Reduce Your Risk of Falling

## 1. Exercise daily

Working balance and strengthening exercises into your daily routine is essential. Remember, you can increase strength at any age. Ask for a referral from your primary care provider to our Balance Therapy Program to determine the best exercise approach for you.

## 2. Medications

Review your medications with your primary care provider. Make sure you take medications as prescribed and discuss any potential side effects you are having. Four or more medications can put you at risk for falling.

## 3. Vision

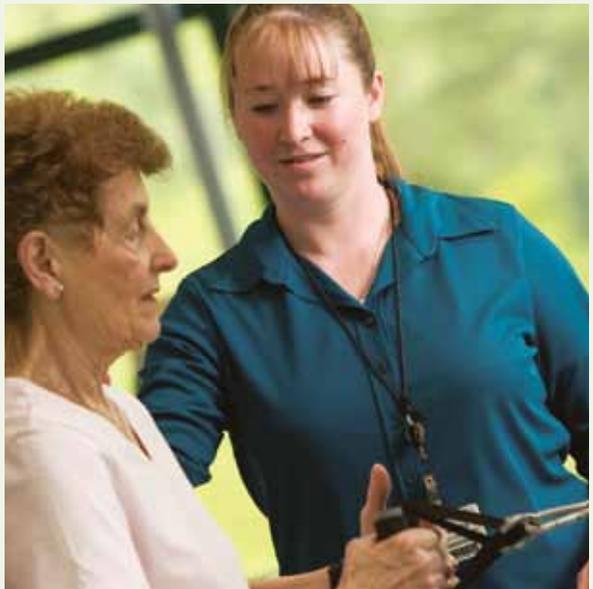
Have your vision checked annually.

## 4. Regular check-ups

Schedule regular medical visits to receive optimal treatment for any health issues that could affect your balance, including diabetes, high blood pressure, cardiac diseases, or neurologic conditions.

## 5. Environment

Make your home and environment safer. Remove scatter rugs, loose cords, and clutter. Install railings on both sides of the stairs. Install grab bars in the bathroom. Make sure there is adequate lighting at night if you need to get up. Be sure to wear supportive, non-skid footwear. Take extra caution in the winter; consider using a trekking or ski pole and treads for your shoes.



# Our Team

Since this program began in 1991, our patients have proven that balance and vestibular rehabilitation works. Our knowledgeable team is involved with balance and fall risk reduction initiatives here at Dartmouth-Hitchcock Medical Center, as well as at the state and national level. Let our experienced and dedicated staff help you to improve your function.



**Dawna Pidgeon, PT**



**David Edson, PT**



**Maggie Stone, PTA**



**Christina Blake, PTA**

## For more information or to make a referral

To join our program, have your primary care provider call us to arrange a referral: (603) 650-5978.

**REHABILITATION MEDICINE** | BALANCE & VESTIBULAR PROGRAM



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