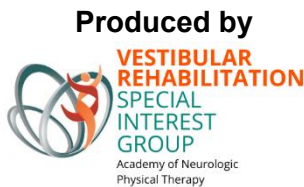


Common Vestibular Function Tests

Authors: Barbara Susan Robinson, PT, DPT; Lisa Heusel-Gillig PT, DPT, NCS

Patient Fact Sheet



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Contact us:

ANPT

1935 County Rd. B2 W.

Ste 165

Roseville, MN 55113

Phone: 952.646.2038

info@neuropt.org

www.neuropt.org

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Vestibular Function Tests (VFTs) check how well your inner ear is working. These tests are usually done by ear and balance specialists, like ENTs, audiologists, or otolaryngologists.

Electronystagmography (ENG test) or Videonystagmography (VNG test)

These tests look at how your eyes move, because eye movement can show if the inner ear is working correctly.

- Both tests record how your eyes move during different tests in light and dark rooms.
- In an ENG test, small stickers (electrodes) are placed near your eyes to record eye movements.
- In a VNG test, a camera inside special goggles records your eye movements.

These tests include:

- Tracking Tests: You follow a moving target with your eyes.
- Positional Tests: Your head and body are moved to see how your eyes respond.
- Caloric Tests: Warm or cool air (or water) is placed in your ear to check how your eyes react. If needed ice water may be used. You may feel dizzy or sick during this test. You may be asked to answer simple questions to distract you, which helps get better results.
 - This test determines the difference between the function of the left and right inner ear.

You may be told to not drink caffeine or eat before these tests. Also, many audiologists do a **hearing test** (audiometry) before ENG or VNG testing. This helps give a full picture of how your inner ear (vestibular system) is working.

Other Common Vestibular Function Tests:

Rotary Chair Test

The rotary chair test is used with VNG to confirm if there is a problem with your inner ear. This test checks how your body reacts to movements that are like what you do every day. During this test, you sit in a special chair that spins right and left at different speeds while recording your eye movements. The rotary chair test is especially good at finding problems that affect both your ears. Not everyone needs this test, and some clinics don't have the equipment because it is expensive and takes up a lot of space.

Computerized Dynamic Visual Acuity (DVA)

This test checks how well you can see while your head is moving, like when you are walking or turning your head from side to side. This test measures how well the **vestibular ocular reflex (VOR)** is working. The VOR allows you to keep your eyes focused on something even when your head is moving. If your VOR isn't working well, your vision might feel shaky or jumpy when you move your head. This is called **oscillopsia**. During the Computerized DVA test you will be asked to look at the letter "E" on a screen and say which way it is pointing while your head is still, and then again with your head moving quickly. If one of your inner ears isn't working well, the letter might need to be bigger for you to see it clearly when turning your head towards that side.

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As you practice special eye and head exercises (gaze stability exercises) you should be able to see the letter even when it is smaller. That means your VOR is getting better.

Another type of DVA test uses a regular eye chart. First, you read the chart while keeping your head still. Then you read it again while moving your head at a set speed. The lowest line you can read correctly is noted in each case. People who have problems in both inner ears (bilateral vestibular loss) often can't read as many lines when their head is moving. Before therapy, a person may miss 4-6 lines compared to when their head is still.

Computerized Dynamic Posturography (CDP)

CDP is a test that checks how well your eyes, inner ear (vestibular) and sensory systems work together to help you stay balanced. One part of the test is the **Sensory Organization Test (SOT)**. It looks at how much your body sways in six different conditions. You'll be tested with your eyes open and closed, and sometimes the floor or background will move with your body. Some CDP machines use moving walls or virtual reality to test your balance. A physical therapist often gives this test, and it helps track your progress in therapy. CDP is not used to diagnose problems with the inner ear.

If the clinic doesn't have a CDP machine, they might use a simpler test called the **Modified Clinical Test for Sensory Integration of Balance (mCTSIB)** instead.

Subjective Visual Vertical (SVV)

The SVV test checks a part of your inner ear called the utricle, which helps you know how gravity affects your body. In this test, you sit in a dark room and look at a line on the wall. The line moves, and when you think it's straight up and down, you click a mouse. You usually do this about ten times. If there is damage to your inner ear or brain on one side, the lines might be tilted instead of straight. There's also a simpler version of this test that uses a bucket and a string with a weight (called a plumb line) to see if you can tell what is straight up and down.

Vestibular Evoked Myogenic Potential (VEMP)

The VEMP test checks if a part of your inner ear called the saccule and the nerve that helps with balance (vestibular nerve) are working properly. The saccule is sensitive to sound. To test it, small stickers (electrodes) are placed on a muscle in the front of your neck. Then, loud clicking sounds are played in each ear. The test measures how much your neck muscles react to the sound. VEMP testing can sometimes help find early signs of one inner ear problem called Meniere's disease. You need to be able to hear for this test to work.

Video Head Impulse Test (vHIT)

The vHIT is a test that checks how well a specific part of your inner ear is working. The test measures how three tiny semicircular canals in each ear are working to help with balance. You wear special goggles with tiny cameras and sensors that watch how your eyes move when your head is moved quickly. The vHIT test spots small, quick eye movements called saccades, which may show if the semicircular canals are not working well. The vHIT is a more advanced version of the Head Impulse Test (HIT) which doesn't need any equipment. But, not all clinics have the equipment for the vHIT.