

DIAGNOSTIC TESTS FOR VESTIBULAR PROBLEMS



Electro/Video-nystagmography (ENG/VNG) uses small electrodes over the skin around the eyes or video goggles to record eye movements. Assesses eyes movements while following a moving object, when the head is placed in different positions, and with changes in temperature to the ear (with air or water).



Rotation Tests use video goggles or electrodes which record eye movements as the head is rotated side to side. These include the auto head rotation, computerized rotary chair test, or a general screening test.



Video Head Impulse Test (vHIT) involves a small set of glasses with a camera which records eye movements as the head is moved with small quick movements.



Vestibular Evoked Myogenic Potential (VEMP) evaluates whether certain vestibular organs and associated nerves are intact and functioning normally. Electrodes are attached to the skin near the eyes and neck as sound is played through ear phones, which stimulates the vestibular organs and causes activation or reduction in activity of corresponding muscles.



Computerized Dynamic Posturography (CDP) tests postural stability in different conditions (eyes open/closed, stationary/moving platform, visual surround moving). A patient wears a safety harness and a force plate measures his/her overall sway or movement.



Audiometry (Hearing tests) consists of presenting words and tones at different pitches and levels, measuring the patient's ability to distinguish these tones/words with headphones. Tympanometry and acoustic reflex are common hearing tests.



Otoacoustic Emissions (OAE) provides information about how the hair cells of the cochlea are working when a series of clicks are produced by a tiny speaker inserted into the ear canal. This is often done in infants and young children.



Electrocochleography (ECog) utilizes an earphone which plays sound in the ear and electrodes which measure the response while a patient lies still.



Auditory Brainstem Response Test (ABR) measures how the nervous system responds to sound and is used when patients cannot respond to audiometry testing (infants). This test can sometimes indicate the presence of an acoustic neuroma.



Magnetic Resonance Imaging (MRI) uses a magnetic field and radio waves to produce an image of body tissues. An MRI of the brain can reveal the presence of tumors, stroke damage, or other soft tissue abnormalities.



Computerized Axial Tomography (CAT/CT) is an x-ray technique for assessing the inside of the temporal bone, the area within the skull that the inner ear is located, to identify any abnormalities, such as a fracture or thinning bone.



Other Tests include blood work, allergy tests, and vision tests to rule out causes of imbalance that are unrelated to the vestibular system.