

## Vestibular Evoked Myogenic Potential Testing

This fact sheet may help you understand what research shows about vestibular evoked myogenic potential (VEMP) testing for diagnosing vestibular disorders. These disorders affect how the inner ear controls your sense of balance and communicates with your brain.

The American Academy of Neurology (AAN) provides this sheet as a service.

The AAN is the world's largest association of neurologists and neuroscience professionals. Neurologists are doctors who identify and treat diseases of the brain and nervous system. The AAN is dedicated to promoting the highest quality patient-centered neurologic care.

Experts from the AAN carefully reviewed the available scientific studies on VEMP testing for diagnosing balance disorders. The following information is based on evidence from those studies. The information summarizes the main findings of the 2017 AAN guideline on VEMP testing for diagnosing balance disorders.

### Overview

In 2015, the US Food and Drug Administration approved VEMP testing to diagnose vestibular disorders.

One of these disorders is superior canal dehiscence syndrome, or SCDS.

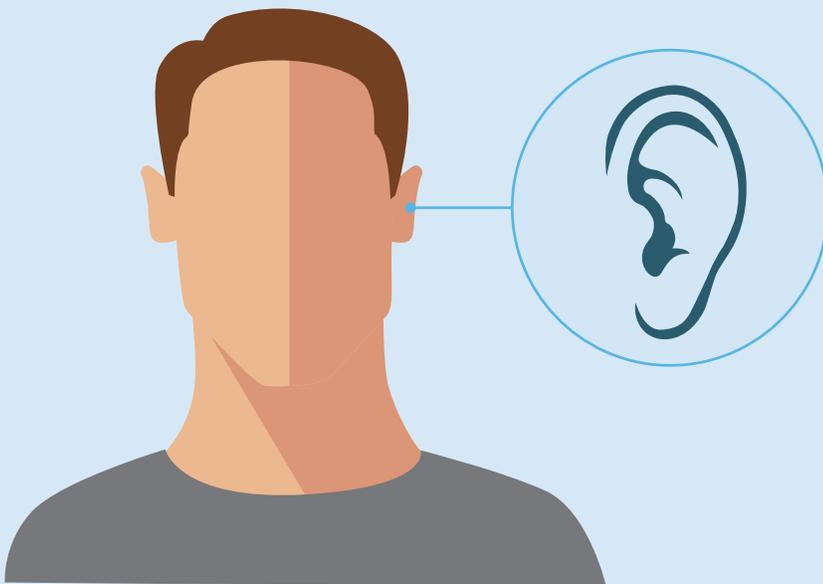
It is rare and can cause you to feel dizzy and unsteady. These symptoms may include:

- Dizziness caused by loud sounds
- Sensitivity to changes in pressure of the surrounding air
- Hearing your own inner body sounds, such as your heartbeat or movements of your eyes or joints
- Ringing in the affected ear

Weak evidence suggests that VEMP testing may help show whether you have SCDS.

For information on the AAN's levels of evidence, see the Key to Evidence Levels at the end of this sheet.

### VEMP Testing



In **VEMP** testing, the doctor looks for how certain muscles respond when sounds reach the inner ear.

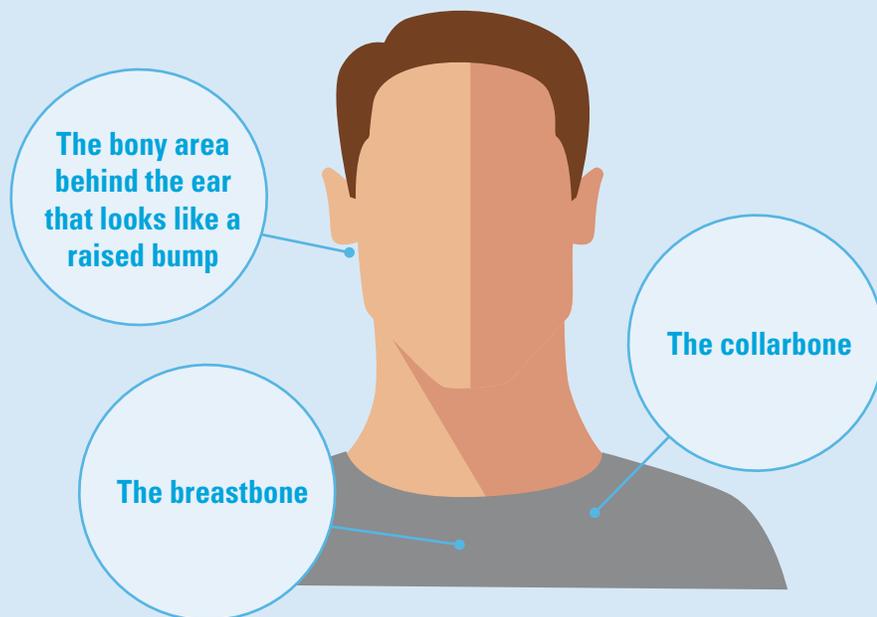
Weak evidence suggests that VEMP testing may help show whether you have SCDS.

There is weak evidence that VEMP testing does **not** help diagnose vestibular migraine. This is a headache disorder where you have periods of dizziness.

## Two Types of VEMP Testing: Cervical and Ocular

### Cervical, or cVEMP, Testing

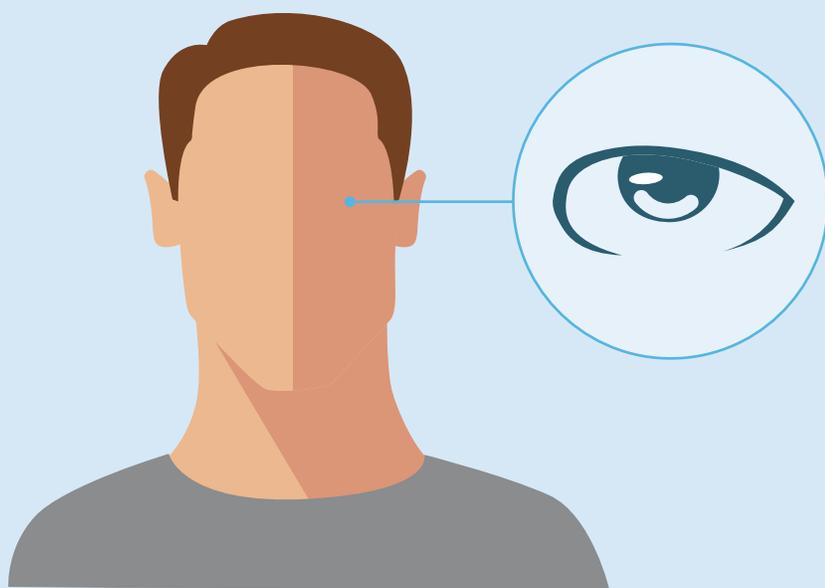
Usually measures responses in the sternocleidomastoid, or SCM.  
The SCM is a large neck muscle attached to three bones:



There is weak evidence that cVEMP testing may help show whether you have SCDS.

There is weak evidence that cVEMP testing does **not** help diagnose benign paroxysmal positional vertigo. This is a disorder where you sometimes have the false sense that you or your environment is moving.

### Ocular, or oVEMP, Testing



There is weak evidence that oVEMP testing may help show whether you have SCDS.

Measures responses in the inferior oblique muscle, one of the muscles that helps your eye move around in the eye socket.

This muscle is attached to the bottom of the eyeball, underneath the skin. It is also attached to the bony area under your eyeball.

To read the full guideline, visit [AAN.com/guidelines](https://www.aan.com/guidelines)

**Key to Evidence Levels**

After the experts review all of the published research studies, they describe the strength of the evidence supporting each recommendation:

*Strong evidence* = more than one high-quality scientific study

*Moderate evidence* = at least one high-quality scientific study or two or more studies of a lesser quality

*Weak evidence* = the studies, while supportive, are weak in design or strength of the findings

*Not enough evidence* = either different studies have come to conflicting results or there are no studies of reasonable quality

This statement is provided as an educational service of the American Academy of Neurology. It is based on an assessment of current scientific and clinical information. It is not intended to include all possible proper methods of care for a particular neurologic problem or all legitimate criteria for choosing to use a specific procedure. Neither is it intended to exclude any reasonable alternative methodologies. The AAN recognizes that specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on all of the circumstances involved.

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