### Availability:

Please visit this website for more information about this instrument:

**NIH Toolbox website**

### Classification:

**Supplemental:** Sports-Related Concussion (SRC) Acute (time of injury until 72 hours), Subacute (after 72 hours to 3 months), and Persistent/Chronic (3 months and greater post concussion) and Acute Hospitalized, Concussion/Mild TBI, Epidemiology, Moderate/Severe TBI: Rehabilitation Traumatic Brain Injury (TBI)

### Short Description of Instrument:

This NIH Toolbox Dynamic Visual Acuity (DVA) test is a measure of gaze stability, which helps identify individuals who may have a deficit of the vestibular system (which regulates internal balance). The NIH Toolbox Visual Acuity Test must be administered followed by the DVA Test.

Participants are seated 12.5 feet from a computer monitor at eye level. For the DVA Test, participants wear lightweight headgear that contains a rate sensor, and are asked to move the head back and forth, as if saying “no.” Once the head is measured to be moving at greater than 180 degrees per second, an optotype flashes on the monitor, and the participant is asked to identify it. Smaller optotypes are displayed as the participant correctly identifies letters, and larger ones are displayed if the participant cannot correctly identify the letter shown, until the computer has calculated the smallest size that the participant can see with the head moving. This is calculated separately for head rotation leftward and rightward from center (though the participant continues shaking the head both ways), and this performance is compared to the participant’s visual acuity when the head was stationary (the NIH Toolbox Visual Acuity Test score, sometimes referred to as “static” visual acuity in the context of the DVA test).

The difference between “static” and dynamic visual acuity represents the vestibular contribution to gaze stability.

The DVA Test takes approximately six minutes to administer and is recommended for ages 3–85.

**Sports-Related Concussion Specific:** Advantages: The DVAT has been used before to classify vestibular problems. For example to distinguish patients with deficient bilateral vestibular function from healthy individuals during walking in place (Grossmann & Leigh, 1990). It has been reported as an easy-to-administer, cost- and time-efficient test of vestibular and visual function (Li et al., 2014).

Limitations: Scores are worse in male and elderly subjects (>50 years of age) (Li et al., 2014).
### Scoring:

Please visit this website for more information about scoring and interpretation of the DVA: [NIH Toolbox Scoring and Interpretation Guide](#).

### References:


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