

# Gaze Stabilization Test

Patient name: Rachel Adams

Age: 35

Examiner: Dr. Laura Mitchell

Date of test: June 20, 2024

## Equipment needed

- Headband with head sensor (InterSense Inertia Cube 2 or 3-axis integrating gyro)
- Adjustable headband
- Software for the Gaze Stabilization Test (GST). Some options:
  - inVision System from NeuroCom
  - VisualEyes from Interacoustics
- Screen for displaying optotypes

## Test procedure

1. Display sequences of the optotype of varying sizes on the computer monitor at a distance of 10 feet.
2. Patient identifies the orientation (up, down, left, right) of the optotype.
3. Reduce optotype size progressively until the smallest size that can be accurately identified is determined.
4. Confirm SVA as the smallest optotype size correctly identified 3 out of 5 times and record this.
5. Fit the patient with the headband containing the head sensor.
6. Ensure the headband is secure and comfortable.
7. Conduct practice trials to familiarize the patient with the test. Instruct the patient to move their head at the requested velocities while correctly identifying the orientation of the optotype displayed, and allow them to be familiar with the test. A metronome sound may play so that the patient moves their head in time (or the examiner moves the head in time) depending on the software.
8. Determine the plane of head movement (yaw, pitch, or roll) for the testing condition.
9. Instruct the patient to fix their gaze at the center of the computer monitor while actively rotating their head.
10. Optotypes will be displayed only when the patient meets or exceeds the minimum specified rotational velocity threshold.
11. Increase head velocity threshold progressively until the patient fails to correctly identify the orientation of the optotype in 3 out of 5 presentations.

**Test findings**

Smallest optotype size correctly identified (Static visual acuity/SVA): 0.8 cm

Test results for maximum head velocity (DVA and degrees/sec):

A variation of the test exists where the head movement starts at the center/neutral position and only goes to one plane (center to the left and back; center to the right and back; and so on). Indicate in the blanks if this variation of the test is done.

**Yaw (Left-Right):**

120 degrees/sec

**Pitch (Up-Down):**

110 degrees/sec

**Roll (Ear-to-Shoulder):**

100 degrees/sec

**% Left/Right Symmetry:** 95%

**Additional notes**

Rachel showed good stability and accuracy in identifying the optotype orientations at high velocities. Slight difficulty was noted in the roll plane at higher speeds. Recommend follow-up tests in three months to monitor any changes or improvements.

**Healthcare professional's information**

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