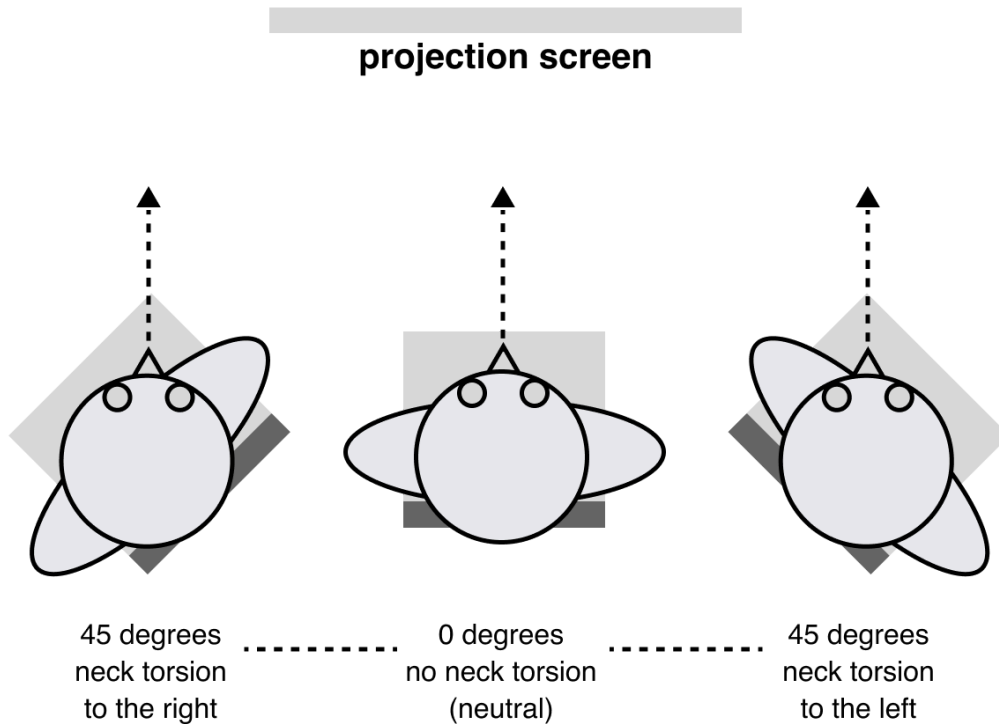


# Smooth Pursuit Neck Torsion Test

Patient name: \_\_\_\_\_ Date: \_\_\_\_\_

Examiner: \_\_\_\_\_

## A experimental setup



### Materials needed

- Swivel chair
- Slowly moving visual target (e.g., pen, laser pointer, computer screen)

### Procedure

#### Step 1: Patient positioning

- Have the patient sit in the swivel chair with their head held in a horizontal position, eyes and head to the front. This is the neutral position.

#### Step 2: Set a baseline

- Instruct the patient to track the slowly moving visual target with their eyes while keeping their head steady. You may also use a small physical object such as a pen and slowly move it from left to right.

### Step 3: Neck torsion to the left

- Have the patient turn their head 45 degrees to the left. Position yourself or the screen in the patient's visual area and instruct them to track the visual target or the physical object you are using. Rotate the patient's chair up to 45 degrees to the right.
- Alternatively, you may simply rotate the chair to swivel their torso while they keep their head stationary, letting you do the test in a small space without needing to reposition.
- Observe the patient's eye movements for any disturbances, such as saccadic (quick, catch-up) eye movements.

### Step 4: Neck torsion to the right

- Do the same things in step 3, but this time, have the patient turn their head in the opposite direction (to the right).
- Observe the patient's eye movements for any disturbances, such as saccadic (quick, catch-up) eye movements.

### Step 4: Evaluation

- Note whether the patient experiences any dizziness or disturbances in their eye movements when the neck is in torsion compared to the neutral position.
- A positive test is indicated by the presence of dizziness or eye movement disturbances during neck torsion.

### Results

Positive:

- Presence of dizziness or eye movement disturbances during neck torsion compared to neutral position, or reproduced dizziness.
- Saccadic eye movements while tracking the visual target near the midline of its movement range while neck is in torsion.

Negative:

- No detectable issues. Saccadic eye movements while tracking the visual target near the edges of its movement range while neck is in torsion are considered normal.

### Interpretation

- A positive SPNT test may suggest cervicogenic dizziness or disturbances in eye-head coordination.
- The test has shown high sensitivity (90%) and specificity (91%) in detecting cervicogenic dizziness in patients with traumatic neck pain. However, further research is needed to establish the clinical value of the SPNT test.

### Additional considerations

- Ensure the patient's safety throughout the test, especially when rotating the chair.
- It may be helpful to repeat the test to confirm consistent results.
- Consider patient history and other diagnostic findings when interpreting the test results.

### Additional notes

### Reference

Tjell, C., & Rosenhall, U. (1998). Smooth Pursuit Neck Torsion Test: A specific test for cervical dizziness. *American Journal of Otology*, 19(1), 76-81. PMID: 9455954.  
<https://pubmed.ncbi.nlm.nih.gov/9455954/>