

Toronto Western Spasmodic Torticollis Rating Scale (TWSTRS)¹

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I. Torticollis Severity Scale

A. Maximal Excursion

1. Rotation (*turn: right or left*)

- 0 = None [0°]
- 1 = Slight [$< 1/4$ range, 1°–22°]
- 2 = Mild [$1/4 - 1/2$ range, 23°–45°]
- 3 = Moderate [$1/2 - 3/4$ range, 46°–67°]
- 4 = Severe [$> 3/4$ range, 68°–90°]

2. Laterocollis (*tilt: right or left, exclude shoulder elevation*)

- 0 = None [0°]
- 1 = Mild [1°–15°]
- 2 = Moderate [16°–35°]
- 3 = Severe [$> 35^\circ$]

3. Anterocollis/Retrocollis (*a or b*)

a. Anterocollis

- 0 = None
- 1 = Mild downward deviation of chin
- 2 = Moderate downward deviation (approximates $1/2$ possible range)
- 3 = Severe (chin approximates chest)

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E. Television

- 0 = No difficulty
- 1 = Unlimited ability to watch television in normal seated position but bothered by torticollis
- 2 = Unlimited ability to watch television in normal seated position but requires use of tricks to control torticollis
- 3 = Unlimited ability to watch television but requires extensive measures to control torticollis **or** is able to view only in nonseated position (e.g., lying down)
- 4 = Limited ability to watch television because of torticollis
- 5 = Unable to watch television more than a few minutes because of torticollis

F. Activities Outside the Home (*e.g., shopping, walking about, movies, dining, and other recreational activities*)

- 0 = No difficulty
- 1 = Unlimited activities but bothered by torticollis
- 2 = Unlimited activities but requires simple tricks to accomplish
- 3 = Accomplishes activities only when accompanied by others because of torticollis
- 4 = Limited activities outside the home; certain activities impossible or given up because of torticollis
- 5 = Rarely if ever engages in activities outside the home

III. Pain Scale (MAXIMUM = 20)

A. Severity of Pain Rate the severity of neck pain due to ST during the last week on a scale of 0–10 where a score of 0 represents no pain and 10 represents the most excruciating pain imaginable. Score calculated as: (worst + best + (2*usual))/4

Best ____

Worst ____

Usual ____

B. Duration of Pain

- 0 = None
- 1 = Present $< 10\%$ of the time
- 2 = Present 10%–25% of the time
- 3 = Present 26%–50% of the time
- 4 = Present 51%–75% of the time
- 5 = Present $> 76\%$ of the time

C. Disability Due to Pain

- 0 = No limitation or interference from pain
- 1 = Pain is quite bothersome but not a source of disability
- 2 = Pain definitely interferes with some tasks but is not a major contributor to disability
- 3 = Pain accounts for some (less than half) but not all of disability
- 4 = Pain is a major source of difficulty with activities; separate from this, head pulling is also a source of some (less than half) disability
- 5 = Pain is the major source of disability; without it most impaired activities could be performed quite satisfactorily despite the head pulling

1. Consky ES, Lang AE. Clinical assessments of patients with cervical dystonia. In: Jankovic J, Hallett M, eds. *Therapy with Botulinum Toxin*. New York, NY: Marcel Dekker, Inc.:1994;211-237.

This rating scale is provided by WE MOVE.
Additional scales and assessment forms are
available at www.wemove.org
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b. Retrocollis

- 0 = None
- 1 = Mild backward deviation of vertex with upward deviation of chin
- 2 = Moderate backward deviation (approximates 1/2 possible range)
- 3 = Severe (approximates full range)

4. Lateral shift (*right or left*)

- 0 = Absent
- 1 = Present

5. Sagittal shift (*forward or backward*)

- 0 = Absent
- 1 = Present

B. Duration Factor (*Weighted x 2*)

- 0 = None
- 1 = Occasional deviation (< 25% of the time, most often submaximal)
- 2 = Occasional deviation (< 25% of the time, often maximal) **or** Intermittent deviation (25%–50% of the time, most often submaximal)
- 3 = Intermittent deviation (25%–50% of the time, often maximal) **or** Frequent deviation (50%–75% of the time, most often submaximal)
- 4 = Frequent deviation (50%–75% of the time, often maximal) **or** Constant deviation (>75% of the time, most often submaximal)
- 5 = Constant deviation (>75% of the time, often maximal)

C. Effect of Sensory Tricks

- 0 = Complete relief by one or more tricks
- 1 = Partial or only limited relief by tricks
- 2 = Little or no benefit from tricks

D. Shoulder Elevation/Anterior Displacement

- 0 = Absent
- 1 = Mild (< 1/3 possible range, intermittent or constant)
- 2 = Moderate (1/3 – 2/3 possible range and constant, > 75% of the time) **or** Severe (> 2/3 possible range and intermittent)
- 3 = Severe and constant

E. Range of Motion (*without aid of sensory tricks*)

- 0 = Able to move to extreme opposite position
- 1 = Able to move head well past midline but not to extreme opposite position
- 2 = Able to move head barely past midline
- 3 = Able to move head toward but not past midline
- 4 = Barely able to move head beyond abnormal posture

F. Time (*up to 60 seconds*) for which patient is able to maintain head within 10° of neutral position without using sensory tricks (*mean of two attempts*)

- 0 = > 60 seconds
- 1 = 46–60 seconds
- 2 = 31–45 seconds
- 3 = 16–30 seconds
- 4 = < 15 seconds

II. Disability Scale (MAXIMUM = 20)

A. Work (*occupation or housework/home management*)

- 0 = No difficulty
- 1 = Normal work expectations with satisfactory performance at usual level of occupation but some interference by torticollis
- 2 = Most activities unlimited, selected activities very difficult and hampered but still possible with satisfactory performance
- 3 = Working at lower than usual occupation level; most activities hampered, all possible but with less than satisfactory performance in some activities
- 4 = Unable to engage in voluntary or gainful employment; still able to perform some domestic responsibilities satisfactorily
- 5 = Marginal or no ability to perform domestic responsibilities

B. Activities of Daily Living (*e.g., feeding, dressing, or hygiene, including washing, shaving, makeup, etc.*)

- 0 = No difficulty with any activity
- 1 = Activities unlimited but some interference by torticollis
- 2 = Most activities unlimited, selected activities very difficult and hampered but still possible using simple tricks
- 3 = Most activities hampered or laborious but still possible; may use extreme tricks
- 4 = All activities impaired; some impossible or require assistance
- 5 = Dependent on others in most self-care tasks

C. Driving

- 0 = No difficulty (or has never driven a car)
- 1 = Unlimited ability to drive but bothered by torticollis
- 2 = Unlimited ability to drive but requires tricks (including touching or holding face, holding head against head rest) to control torticollis
- 3 = Can drive only short distances
- 4 = Usually cannot drive because of torticollis
- 5 = Unable to drive and cannot ride in a car for long stretches as a passenger because of torticollis

D. Reading

- 1 = Unlimited ability to read in normal seated position but bothered by torticollis
- 2 = Unlimited ability to read in normal seated position but requires use of tricks to control torticollis
- 3 = Unlimited ability to read but requires extensive measures to control torticollis **or** is able to read only in nonseated position (e.g., lying down)
- 4 = Limited ability to read because of torticollis despite tricks
- 5 = Unable to read more than a few sentences because of torticollis

(continues on back)