

Spinal Cord Assessment Tool for Spastic Reflexes:

R	L		Clonus of the plantarflexors was quantified in response to a rapid passive dorsiflexion of the ankle (A). The ankle was dorsiflexed at an angle that triggered clonus, and the duration of clonic bursts was timed. An ordinal rating from 0 to 3 was determined by the duration of clonic activity where 0 is no reaction; 1 is mild, clonus was maintained less than 3 seconds; 2 is moderate, clonus persisted between 3 and 10 seconds; and 3 is severe, clonus persisted for more than 10 seconds.
		SCATS: Clonus	
0	0	no reaction	
1	1	Mild <3 secs	
2	2	3< Moderate <10 secs	
3	3	Severe > 10 secs	

			With the knee and hip extended to 0°, the clinician applied a pinprick stimulus for 1 second to the medial arch of the subject's foot (B). Excursion of the big toe into extension, ankle dorsiflexion, and knee and hip flexion were visually observed for severity. The rating scale consisted of a score from 0 to 3, where 0 is no reaction to stimulus; 1 is mild, less than 10° of excursion in flexion at the knee and hip or extension of the great toe; 2 is moderate, 10° to 30° of flexion at the knee and hip; and 3 is severe, 30° or greater of knee and hip flexion.
		SCATS: flexor spasms.	
0	0	no reaction	
1	1	less than 10° of excursion in flexion at the knee and hip or extension of the great toe	
2	2	moderate, 10° to 30° of flexion at the knee and hip	
3	3	severe, 30° or greater of knee and hip flexion.	

			With the contralateral limb extended, the tested knee and hip were positioned at angle of 90° to 110° of hip and knee flexion, and then both joints were simultaneously extended. One hand cupped the heel while the other was placed on the outside of the thigh (C). Once a reaction was elicited, the duration of visible muscle contraction in the quadriceps muscle was measured by observing superior displacement of the patella. The timed scale (0–3) that was used for clonus was also applied to the timed extensor spasms.
		SCATS: extensor spasms	
0	0	no reaction	
1	1	Mild <3 secs	
2	2	3secs < Moderate <10 secs	
3	3	Severe > 10 secs	

Source:

Adapted from Benz EN et al. A physiologically based clinical measure for spastic reflexes in spinal cord injury, Arch Phys Med Rehabil, 86: 52-9, 2005; paragraphs under "Instruments" - "SCATS: clonus" and "SCATS: flexor spasms" and "SCATS: extensor spasms". Used with permission from Elsevier Publishing.

WORKSHEET – Spinal Cord Assessment Tool for Spastic Reflexes:

Patient name: _____

Date: _____

R	L	
SCATS: Clonus		
0	0	no reaction
1	1	Mild <3 secs
2	2	3< Moderate <10 secs
3	3	Severe > 10 secs

SCATS: <i>flexor spasms.</i>		
0	0	no reaction
1	1	less than 10° of excursion in flexion at the knee and hip or extension of the great toe
2	2	moderate, 10° to 30° of flexion at the knee and hip
3	3	severe, 30° or greater of knee and hip flexion.

SCATS: <i>extensor spasms</i>		
0	0	no reaction
1	1	Mild <3 secs
2	2	3secs < Moderate <10 secs
3	3	Severe > 10 secs