Post-Stroke Spasticity (PSS) Risk Classification System

This tool is recommended by experts in the field of stroke rehabilitation and neurorehabilitation to be used when evaluating patients who have had a stroke, ideally within the first 12 weeks post stroke. However, it can still be used at other timepoints. It is recommended that this screening tool is used during regular follow-up visits following a stroke, to identify and manage symptoms of PSS.

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NEXT STEPS

Urgent referral

Refer to a spasticity specialist

If both of the following criteria are met:

1. Moderately, markedly or severely increased muscle stiffness across two or more joints[a,1,2]
2. Severe loss of sensorimotor function (e.g., severe decrease in surface sensation, impaired proprioception and severe motor dysfunction)[b,3,4]

- Urgently initiate physiotherapy (evaluation and treatment)
- Immediately refer the patient to a physician or other healthcare professional who is a spasticity specialist[8,9]

Routine referral

Consult with the multidisciplinary team (MDT)

In the presence of mildly[a] increased muscle tone across one joint and involuntary muscle contractions in the affected limb[*c,1] **plus one or more of the following:**

1. Reduced sensitivity on one side of the body and / or visual inattention[d,1,5]
2. Weakness of the limbs and problems with function that cause difficulties with active range of motion and / or daily living[e,1,2,6,7]
3. Lesion load in the corticospinal tract*, as seen on CT and / or MRI scan[1]

- Initiate physiotherapy and consult with the MDT for advice[9,10]
- If the patient is still under your care and symptoms do not resolve, refer them to a spasticity specialist and request that they assess the patient and decide if additional intervention is needed[8]

Periodic monitoring

Monitor periodically

Monitor periodically (re-evaluate in three to six months) if the patient has persistent dexterity problems in the absence of increased tone*

- Refer to a general physiotherapist or occupational therapist for treatment and / or a self-stretching programme[8]
- Patient should be evaluated within three months, and monitored by a physiotherapist or occupational therapist with experience in stroke management*
- Provide the patient and caregivers with information about post-stroke management and relevant contacts[9]

Possible additional risk factors for the development of PSS include: Smoking (defined as current and past smokers)[1,11] | Left-sided stroke[1] | Enhanced manual activities prior to the stroke[1].

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The PSS Classification System was created with the assistance of a group of international experts in the field of PSS, utilising both published risk factors and their own clinical experience.

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***** Based on the clinical expertise of Dr Rhoda Allison, Dr Ganesh Bavikatte, Professor Philippe Marque, Associate Professor Barry Rawicki, Dr Maria Matilde de Mello Sposito, Dr Paul Winston & Professor Jörg Wissel.

a Mildly increased muscle stiffness is a Modified Ashworth Scale (MAS) 1 or +1, while moderately is MAS 2, markedly is MAS 3 and severe is MAS 4*. (See Bohannon RW *et al.* 1987 for more information)[12].

b Measured using the Fugl-Meyer Upper Extremity Scale[3] (see Fugl-Meyer AR *et al.* 1975 for more information)[4].

c Muscle contractions may occur due to spasms, disturbed reciprocal inhibition or spastic dystonia and should be differentiated from contractures.

d Visual inattention includes hemianopsia, scotoma or visual neglect.

e Can be measured with the Barthel Index (low score) and EQ-5D (low score)[1].

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