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# What is the NIH Stroke Scale (NIHSS) and how is it performed?

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Author: Edward C Jauch, MD, MS, FAHA, FACEP; Chief Editor: Helmi L Lutsep, MD more...

## References

## ANSWER

A useful tool in quantifying neurologic impairment is the National Institutes of Health Stroke Scale (NIHSS) (see Table 2, below). The NIHSS enables the healthcare provider to rapidly determine the severity and possible location of the stroke. NIHSS scores are strongly associated with outcome and can help to identify those patients who are likely to benefit from reperfusion therapies and those who are at higher risk of developing complications from the stroke itself and potential reperfusion strategies.

The NIHSS is easily performed; it focuses on the following 6 major areas of the neurologic examination:

- Level of consciousness
- Visual function
- Motor function
- Sensation and neglect
- Cerebellar function
- Language

The NIHSS is a 42-point scale. Patients with minor strokes usually have a score of less than 5. An NIHSS score of greater than 10 correlates with an 80% likelihood of proximal vessel occlusions (as identified on CT or standard angiograms). However, discretion must be used in assessing the magnitude of the clinical deficit and resulting disability; for instance, if a patient's only deficit is mutism

or blindness, the NIHSS score will be 3. Additionally, the scale does not measure some deficits associated with posterior circulation strokes (ie, vertigo, ataxia). [58]

Table 2. National Institutes of Health Stroke Scale (Open Table in a new window)

	Category	Description	Score
1a	level of consciousness (LOC)	Alert Drowsy Stuporous Coma	0 1 2 3
1b	LOC questions (month, age)	Answers both correctly Answers 1 correctly Incorrect on both	0 1 2
1c	LOC commands (open and close eyes, grip and release nonparetic hand)	Obeys both correctly Obeys 1 correctly Incorrect on both	0 1 2
2	Best gaze (follow finger)	Normal Partial gaze palsy Forced deviation	0 1 2
3	Best visual (visual fields)	No visual loss Partial hemianopia Complete hemianopia Bilateral hemianopia	0 1 2 3

4	Facial palsy (show teeth, raise brows, squeeze eyes shut)	Normal Minor Partial Complete	0 1 2 3
5	Motor arm left* (raise 90°, hold 10 seconds) (preferably with the palm facing up)	No drift Drift Cannot resist gravity No effort against gravity No movement	0 1 2 3 4
6	Motor arm right* (raise 90°, hold 10 seconds) (preferably with the palm facing up)	No drift Drift Cannot resist gravity No effort against gravity No movement	0 1 2 3 4
7	Motor leg left* (raise 30°, hold 5 seconds)	No drift Drift Cannot resist gravity No effort against gravity No movement	0 1 2 3 4
8	Motor leg right* (raise 30°, hold 5 seconds)	No drift Drift Cannot resist gravity No effort against gravity No movement	0 1 2 3 4

9	Limb ataxia (finger-nose, heel-shin)	Absent	0
		Present in 1 limb	1
		Present in 2 limbs	2
10	Sensory (pinprick to face, arm, leg)	Normal	0
		Partial loss	1
		Severe loss	2
11	Extinction/neglect (double simultaneous testing)	No neglect	0
		Partial neglect	1
		Complete neglect	2
12	Dysarthria (speech clarity to "mama, baseball, huckleberry, tip-top, fifty-fifty")	Normal articulation	0
		Mild to moderate dysarthria	1
		Near to unintelligible or worse	2
13	Best language** (name items, describe pictures)	No aphasia	0
		Mild to moderate aphasia	1
		Severe aphasia	2
		Mute	3
	Total	-	0-42

\* For limbs with amputation, joint fusion, etc, score 9 and explain

\*\* For intubation or other physical barriers to speech, score 9 and explain. Do not add 9 to the total score. NIH Stroke Scale (PDF)

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