NIHSS SCORING TIPS

NIHSS courtesy of National Institute of Neurological Disorders and Stroke

Regional Stroke Network Réseau Régional des AVC CHAMPLAIN

West GTA Stroke Network

ITEM 1a: Alertness

Test by asking simple probing questions:

1. **How are you doing today?**
2. **Do you have any pain?**

Scoring Tips

This is the only item you can go back and change scoring:

*If patient **scores 1** (arousable by minor stimulation to respond) but becoming drowsier as the assessment progresses (requiring repeated stimulation and no longer able to attend), change **score to 2,** discontinue NIHSS and complete GCS.*

ITEM 1b: Questions

Test by asking patient month and age.

Scoring Tips

The answer must be correct—there is no partial credit for being close

*This test seeks to assess orientation and not aphasia. However, patient with aphasia may not be able to provide answer. **Score 2** for aphasic patients who are unable to say, write or demonstrate the answer.*

ITEM 1c: Commands

Test by asking patient to close their eyes and open them and to make a fist with the nonparetichand and then open their hand.

Scoring Tips

If the patient does not respond to the command, the task should be repeated and demonstrated once (pantomimed).

Credit is given if an unequivocal attempt is made but not completed due to weakness
May substitute 1-step command if needed.

ITEM 2: Best Gaze

Hold the chin and put your finger at arm's length.

Ask patient to follow your finger: move horizontally to one side until iris touches the corner of the eye, then move your finger horizontally to the other side.

Scoring Tips

Gaze is testable in aphasic patient—use tracking of examiner's face by establishing eye contact and moving around the bed when patient not tracking finger.

***Score 1** if the patient has a partial gaze palsy meaning horizontal eye movements are not complete in **one or both eyes** and there is no forced deviation of gaze to one side that can't be overcome.*

***Score 2** if there is forced deviation to one side which cannot be overcome by tracking or oculocephalic reflex (Doll's eyes).*

ITEM 3: Visual Fields

Test upper and lower quadrants by confrontation using finger counting or by flashing fingers.

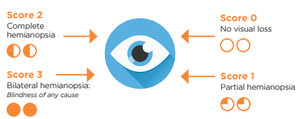
Cover 1 eye and test four quadrants of each eye.

Scoring Tips

Patient can be scored as normal if they look appropriately at the side of the moving fingers.

If there is pre-existing, unilateral blindness, visual fields of the remaining eye are scored.

*If patient does not understand the commands, use blink to threat in upper and lower fields of each eye: if blinking with visual threats in all fields, **score 0.***



ITEM 4: Facial Palsy

Ask patient to show their teeth, raise eyebrows, close eyes tightly: you can demonstrate the command. Look for symmetry of nasolabial fold and smile.

Scoring Tips

***Score 1** if the patient has asymmetry of the lower face (flattened nasolabial fold, more teeth seen on one side at rest or when smiling).*

***Score 2** if severe weakness of the lower face: when asked to smile, complete paralysis on one side.*

***Score 3** for weakness of lower and upper face: unable to close the eye, no wrinkling of forehead.*

***Aphasia:** Tickle nares with a rolled-up tissue, if patient does not comprehend. Score according to facial movement during grimacing.*

ITEM 5&6: Motor Arm/Leg

Test and score each limb separately starting with the non-paretic limb.

Arm: Place with palm down at 90° if sitting or 45° if semi-fowler's position and count out loud for 10 sec
Leg: Place at 30° (test supine) and count out loud for 5 sec

Scoring Tips

Score 3 or 4** if arm falls suddenly to the surface, meaning there is no anti-gravity strength. If there is movement in the limb when resting on the surface, **score 3**, if no movement of the limb at all, **score 4.

ITEM 7: Limb Ataxia

Perform finger to nose and heel to shin on both sides.

Place your index in the intact visual field and at arm's length to ensure patient fully extends the arm.

Scoring Tips

If visual impairment, score from extended finger position to nose.

*If weakness in the limb impairing ability to do test, **score 0.***

Aphasia:** if does not understand the instruction, passively move the limb to show what is expected. If can't understand **score 0.

ITEM 8: Sensory

Test sensation or grimace to pinprick to face, arms and legs and compare side to side.

Ask: Can you feel this? Is it the same or different? Record grimace or withdrawal from noxious stimulus in patient who does not understand.

Scoring Tips

Only score sensory loss related to stroke, do not test on hands and feet to remove neuropathy from scoring. Only score if sensory loss clearly demonstrated. If not, *score 0.*

ITEM 9: Best Language

This is complimented by information collected in preceding sections.

Use cookie jar picture to assess fluency
Use pictures to assess naming
Use sentences to assess reading

Scoring Tips

If visual impairment, assess:

- ***Fluency*** *during conversation*
- ***Naming*** *by placing common objects, such as a coin or pen, in the non-affected hand*
- ***Writing*** *by giving a pen a paper and ask to write "Today is a nice day"*

ITEM 10: Dysarthria

Ask patient to repeat the words:

Mama, tiptop, fifty-fifty…

Scoring Tips

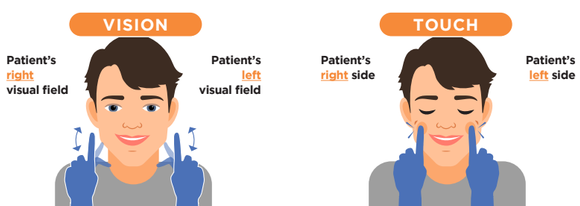
Score 1 *for mild to moderate slurring, but intelligible, such as "tipsh, topf".*

Score 2 *for no intelligible speech or mute (from either severe dysarthria or severe expressive aphasia).*

ITEM 11: Inattention

Visual: examine with both eyes open. Look at my nose. Which finger am I wiggling? The right? The left? Or both? Test upper and lower visual fields

Sensory: Close your eyes. Am I touching you on the right side, the left, or both? (face, arms, legs)



L HEMISPHERE : LANGUAGE

Damage on the left side of the brain causes right-side deficits: *weakness, sensory, visual field*

Score 1

Mild to moderate —

some obvious loss of fluency or comprehension, but patient able to get some ideas across

"mo-mother do di-dish"

Score 2

Severe aphasia —

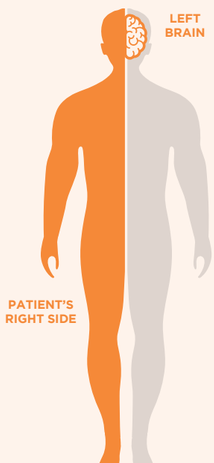
all communication is very limited and fragmented: examiner must guess what the patient is trying to say, or patient is mute

"euh…kkk…"

Score 3:

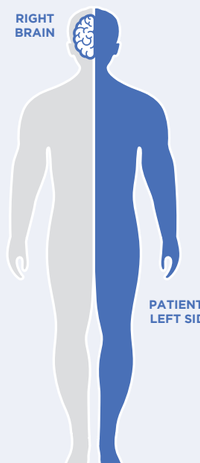
Mute, global aphasia —

this score is reserved for patient with no usable speech and unable to follow any one-step command



R HEMISPHERE : INATTENTION

Damage on the right side of the brain causes left-side deficits: *weakness, sensory, visual field*



Score 0:

- *If no abnormality*
- *If patient has a severe visual loss preventing double simultaneous stimulation, such as hemianopia, but the response to cutaneous stimuli is normal and appear to attend to both side*
- *If patient has aphasia but does appear to attend to both sides. Abnormality is scored only if present, so this item is never untestable*

Score 1:

- *Inattention or extinction to one modality*

Score 2:

- *Profound inattention or extinction to more than one modality*
- *Patient does not recognize their own left hand when brought to right visual field*