NIHSS Testing Hints

1A. Level of Consciousness (LOC): Must choose a response, even if full evaluation is prevented by such obstacles such as an endotracheal tube, language barrier, orotracheal trauma/bandages. A 3 is scored only if the patient makes no movement (other than reflexive posturing) in response to noxious stimuli.

1B. LOC questions: Ask month and his/her age. Answer must be correct – there is no partial credit for being close. Aphasic and stuporous patients who do not comprehend the questions will score 2. Patients unable to speak because of endotracheal intubation, orotracheal trauma, severe dysarthria from any cause, language barrier or any other problem not secondary to aphasia are given a 1. Do not help patient with verbal or non verbal clues.

1C. LOC Commands: Ask to open and close eyes then grip and release the non-paretic hand. Substitute another one step command if the hands cannot be used. Credit is given if an unequivocal attempt is made but not completed due to weakness. If patient does not follow command can use pantomime to score the results. Patients with trauma, amputation, or other physical impediments should be given suitable one step commands. Only the first attempt is scored.

2. Best Gaze: Only horizontal eye movements will be tested. If patient has a conjugate deviation of the eyes that can be overcome by voluntary or reflexive activity, the score will be 1. If patient has isolated peripheral nerve paresis (CN III, IV, OR VI) score a 1. Gaze is testable in all aphasic patients. Patients with ocular trauma, bandages, preexisting blindness or other disorders of visual acuity or fields should be tested with reflexive movements and a choice made by the investigator. Establishing eye contact then moving about the patient from side to side will occasionally clarify the presence of a partial gaze palsy.

3. Visual: Tested by confrontation, using finger counting or visual threat as appropriate. Patient must be encouraged, but if they look at the side of the moving fingers appropriately, this can be scored as normal. If there is unilateral blindness or enucleation, visual fields in the remaining eye are scored. Score 1 only if a clear cut asymmetry, including quadrantanopia is found. If patient is blind from any cause, score 3. Double simultaneous stimulation is performed at this point. If there is extinction patient receives a 1, and the results are used to answer question 11.

4. Facial Palsy: Ask, or use pantomime to encourage the patient to show teeth or raise eyebrows and close eyes. Score symmetry of grimace in response to noxious stimuli in the poorly responsive or non-comprehending patient. If facial trauma/bandages, orotracheal tube, tape or other physical barriers obscure the face, these should be removed to the extent possible.

5A & 5B. Motor Arm Left/Right: The limb is placed in the appropriate position: extend the arms (palms down) 90 degrees (if sitting) or 45 degrees (if supine). Drift is scored if the arm falls before 10 seconds. The aphasic patient is encouraged using urgency in the voice and pantomime, but not noxious stimuli. Each limb is tested in turn, beginning with the non-paretic arm. Only in case of amputation or joint fusion at the shoulder can it be scored as un-testable.
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6A & 6B. Motor Leg Left/Right: The limb is placed in the appropriate position: hold the leg at 30 degrees (always tested supine). Drift is scored if the leg falls before 5 seconds. The aphasic patient is encouraged using urgency in the voice and pantomime, but not noxious stimuli. Each limb is tested in turn, beginning with the non-paretic leg. Only in case of amputation or joint fusion at the hip can it be scored as un-testable.

7. Limb Ataxia: Aimed at finding evidence of a unilateral cerebellar lesion. Test with eyes open. In case of visual defect, ensure testing is done in intact visual field. The finger-nose-finger and heel-shin tests are performed on both sides, and ataxia is scored only if present out of proportion to weakness. Ataxia is absent in the patient who cannot understand or is paralyzed. Only in the case of amputation or joint fusion should it be marked as un-testable and clearly documented why. In case of blindness, test by having the patient touch nose from extended arm position.

8. Sensory: Sensation or grimace to pinprick when tested or withdrawal from noxious stimulus in the obtunded or aphasic patient. Only sensory loss attributed to stroke is scored as abnormal and the examiner should test as many body areas (arms (not hands), legs, trunk, face) as needed to accurately check for hemi-sensory loss. A score of 2, “severe or total sensory loss,” should only be given when a severe or total loss of sensation can be clearly demonstrated. Stuporous and aphasic patients will, therefore, probably score a 1 or 0. The patient with brainstem stroke who has bilateral loss of sensation is scored 2. If the patient does not respond and is quadriplegic, score 2. Patients in coma automatically given a 2 on this item.

9. Best Language: A great deal of information on comprehension will be obtained during the preceding section of the examination. For this scale item, the patient is asked to describe what is happening in the attached picture, to name the items on the attached naming sheet and to read from the attached list of sentences. Comprehension is judged from the response here, as well as to all the commands in the preceding general neurological exam. If visual loss interferes with the tests, ask the patient to identify objects placed in the hand, repeat, and produce speech. The intubated patient should be asked to write. The patient in coma will automatically score 3 on this item. The examiner must choose a score for the patient with stupor or limited cooperation, but a score of 3 should only be used if the patient is mute and follows no one step commands.

10. Dysarthria: If patient is thought to be normal, an adequate sample of speech must be obtained by asking patient to read or repeat words from the attached list. If the patient has severe aphasia, the clarity of articulation of spontaneous speech can be rated. Only if the patient is intubated or has other physical barriers to producing speech should the examiner score as un-testable and clearly write an explanation for this choice.

11. Extinction and Inattention: Sufficient information to identify neglect may be obtained during the prior testing. If the patient has a severe visual loss preventing visual double simultaneous stimulation, and the cutaneous stimuli are normal, the score is normal. If the patient has aphasia but does not appear to attend to both sides, the score is normal. The presence of visual spatial neglect or anosognosia may also be taken as evidence of abnormality. Since the abnormality is scored only if present, the item is never un-testable.