



09.2.1
DEPARTMENT OF NEUROLOGY NO.1
PRACTICAL SKILLS

RED.: 01

DATE: 21.02.2020

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«A P P R O V E D»

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PRACTICAL SKILLS IN NEUROLOGY

MENTAL STATE

1. Alertness
2. Speech (fluency, understanding, repetition, naming)
3. Memory (long term and short term)
4. Calculus
5. Cognitive evaluation: MMSE (Mini Mental State Examination) and MoCA test (Montreal Cognitive Assessment)

CRANIAL NERVES:

n. I – N. Olfactory n.

1. Examination of the olfactory function

n. II – Optic n.

1. Visual acuity
2. Visual field

n. III, IV, VI – group of oculomotor nerves (common oculomotor, trochlear, abducens)

- Static examination:**
1. Eye position, presence of convergent / divergent strabismus
 2. Palpebral openings: ptosis uni-/bilateral
 3. Size of the pupils / anisocoria

Dynamic examination:

1. Eye motility: horizontal, vertical, oblique axis
2. Photopupilar reaction: direct, indirect (consensual)

n. V – Trigeminal n.

Specific complaints of the Vth nerve lesion

- Static examination:**
1. Temporal muscle trophicity
 2. Jaw position

Dynamic examination:

1. Walleix points
2. Evaluation of sensory disturbances on the face

n. VII – Facial n.

Static examination: facial symmetry, blinking

Dynamic examination: mimic muscle function: *mm.frontalis, corrugator supercillii, orbicularis oculi, buccinator, risorius, orbicularis oris*



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n. VIII – Vestibulo-Cochlear n.

Specific complaints of the VIIIth nerve lesion (vertigo, hypoacusis)

1. Evaluation of the auditory function
2. Vestibular function examination: nystagmus, Romberg position

nn. IX, X, XII – bulbar group nerves (glossopharyngeal, vagus, hypoglossal)

Specific complaints of the bulbar nerves lesion (dysarthria, dysphonia, dysphagia)

Dynamic examination:

1. Position of the soft palate, uvula at rest and in contraction
2. Position and trophicity of the tongue
3. Gag reflex and vomiting reflex

n. XI – Accessory n.

Static examination: 1. Shoulder position and symmetry

2. m. sternocleidomastoideus symmetry, presence of torticollis

Dynamic examination:

1. Head rotation, resistance by opposition
2. Shoulder lifting

MOTILITY EXAMINATION:

1. Posture and gait examination:

- normal gait, walking on heels, walking on toes, tandem walk

2. Coordination

- Fine finger movements, diadochokinesia, finger-nose test, heel-shin test, nystagmus

3. Involuntary movement

4. Muscle strength:

- Barre test (superior and inferior)
- Assessment of muscle strength: shoulder abduction, elbow flexion / extension, hand flexion / extension, finger flexion / extension, hip flexion / extension, knee flexion / extension, plantar flexion / extension
- Assessment of the degree of muscle weakness: mild, moderate, deep paresis, plegia

5. Muscle tone:

- normotonia
- hypotonia
- hypertonia: spastic type, plastic type
- axial tone

6. Deep tendon reflexes:

- tricipital, bicipital, carpo-radial, rotulian, Achilles
- interpretation: normoreflexia, hyperreflexia, areflexia, plantar / patellar clonus

7. Pathological reflexes:



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- extension: Babinski
- flexion: Hoffman, Rossolimo

8. Oral automatism reflexes: Marinescu-Radovich / palmomental, Snout reflex;

SENSORY EXAMINATION:

1. Superficial sensation:

- tactile
- pain

2. Deep sensation:

- proprioception
- vibration

Cerebellum EXAMINATION:

1. Posture, gait (ataxia, astasia, abazia)
2. Romberg position
3. Coordination tests (interpretation: dismetria, intensional tremor):
 - Finger-nose
 - Heel to Sheenf
 - diadochokinezia
4. Nystagmus
5. Muscle tone

MENINGEAL SIGNS:

- Occipital muscle stiffness
- Kerning sign
- Brudzinskii sign: superior, middle, inferior

ELONGATION SIGNS:

- Neri,
- Lasegue,
- Wasserman,
- Mazkiewich,
- Patric, Bonnet;

EXAMINATION OF A COMATOSE PATIENT: pupils, eye position, facial symmetry, corneal reflex, conjunctival reaction to dolor stimuli, deep-tendon reflexes, pathological reflexes, muscle tone, meningeal signs, Glasgow score.

<https://stanfordmedicine25.stanford.edu/the25/gait.html>