

Techniques of Examination the Nervous System (Bates)

General approach

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Mental status, speech

Cranial Nerves

Sense of smell

Optic fundi (at end)

Visual fields

Confrontation

Extinction

Extraocular movements

Pupil constriction

Observe for ptosis

Temporal and masseter muscles

Facial sensation-light touch, temperature

Corneal reflex

Facial movement- observe and assess movement

Raise eyebrows, close eyes, show teeth, puff out cheeks

Hearing

Voice quality

Gag

Trapezii and sternomastoids

Inspect muscle bulk (atrophy), fasciculations, involuntary movements, muscle tone

Observe and assess tongue movement

Motor system

Walk and observe balance, posture, swinging of arms, movement of legs

Heel to toe

Walk on toes heels

Hop in place, bend knees

Pronator drift, raise arms over head

Arms against wall, grips

Muscle tone-limbs

Passive stretch

Muscle strength

Atrophy

Elbow flex/extension

Wrist extension

Finger abduction

Finger – thumb opposition

Hip flexion, abduction, adduction

Knee flexion, extension

Ankle dorsiflexion, plantar flexion

Rhomberg (cerebellar vs position sense and vision)

RAMs

Point-to-point testing (finger-nose)

Toe taps

Heel-shin

Sensory assessment

Modalities: pain, vibration, light touch, temperature, stereognosis

Bilateral, dermatomes, distal vs proximal, (example: shoulders, inner outer aspects forearms, thumbs, little fingers, thighs, medial lateral calves, little toes, each buttock) Arms, trunk, legs

Extinction

Position and vibration- distal to proximal- tuning fork , your own hands

Discriminative sensations: stereognosis- objects, number identification, two-point discrimination

Reflexes

Biceps, triceps, brachioradialis, abdominal, knee, ankle, plantar response, clonus, anal reflex

Special Maneuvers

Brudzinski's sign-flex neck, note resistance or pain

Kerning's sign-bend leg at hip then straighten leg

Grasp reflex

Snout reflex

Sucking reflex

Eyes

Usually at end-fundi assessment