CSM Anatomy Cranial Nerve Worksheet KEY

Cranial Nerve	Passageway	Function	Comments e.g. autonomic to, tests of
I. Olfactory	Through (thru) cribriform plate	Sensory from olfactory receptors in nasal cavity	Smell tests
II. Optic	Thru optic canal into orbit	Sensory from retina of eye	Tests of vision
III. Oculomotor	Superior orbital fissure to orbit	Motor (mixed) to external eye muscle Autonomic motor to iris and ciliary body	Autonomic to internal eye muscles for pupil adjustment and focusing of lens Patient asked to track a finger, check papillary reflexes
IV. Trochlear	Superior orbital fissure to orbit	Motor (mixed) to superior external eye muscle	Patient asked to track a finger down and laterally
V. Trigeminal	Superior orbital fissure to orbit Foramen rotundum Foramen ovale	Mixed – sensory from face, mouth, teeth Motor to muscles of mastication	Clench jaw, use cotton swab to lightly touch face for sensation
VI. Abducens	Superior orbital fissure to orbit	Mixed to external eye muscle	Track finger movement laterally
VII. Facial	Internal auditory meatus	Mixed to facial muscles, parasympathetic fibers to glands near mouth and nose, sensory from tongue for taste	Autonomic to glands of face including salivary glands Patient asked to use muscles of facial expression, taste test

VIII. Vestibulocochlear	Internal auditory meatus	Sensory from hearing and balance receptors	Check hearing and balance
XI. Glossopharyngeal	Jugular foramen	Mixed – parasympathetic motor to salivary gland, somatic motor to pharynx Sensory fibers from pharynx and tongue (for taste)	ANS Check gag reflex
X. Vagus	Jugular foramen	Mixed - major parasympathetic nerve to thoracic and abdominal viscera controlling "rest and repose" response	ANS Check swallowing reflex
XI. Accessory	Jugular foramen	Mixed – mostly motor to muscles of neck and scalp	Turn head against resistance or shrug shoulders against resistance
XII. Hypoglossal	Hypoglossal canal	Mixed – mostly motor to muscles of tongue for speech, swallowing	Patient tongue thrust should be straight