

Recitation 6 Worksheet

Cranial Nerves

	Cranial Nerve	Function	Location of cell bodies
1	Olfactory	Smell information	thalamus
2	Optic	Visual information	Thalamus small branch synapses on the superior colliculus
3	Oculomotor	Controls eye movements	midbrain
4	Trochlear	Controls eye movements	midbrain
5	Trigeminal	Feeling to face Controls chewing muscles Suicide nerve – tumors of Schwann cells that wrap this nerve, or demyelination due to MS lead to a very painful disease with poor treatment	pons
6	Abduces	Controls eye movements	pons
7	Facial	Primary nerve that moves face Taste Speech (moves lips) Swallowing Bell's palsy – due to infection or temporary demyelination of this nerve, can't move side of face contralateral to affected nerve	Junction of pons & medulla
8	Vestibulocochlear (auditory)	Hearing Balance	Synapses in inferior colliculus (midbrain)
9	Glossopharyngeal	Swallowing Taste Speech (controls muscles of the pharynx)	medulla
10	Vagus	Sends peripheral info to autonomic NS Controls breathing rate, heart rate, blood pressure, gut function Lesions to this nerve lead to death	medulla
11	Spinal Accessory	Moves shoulder muscles	upper cervical portion of the spinal cord
12	Hypoglossal	Moves tongue	medulla

Mnemonic: On Old Olympus' Towering Top A Finn And German Viewed A Hop

Brainstem lesions

Lesions	Defects
Midbrain	Eye movement Auditory SN produces DA – cells die in Parkinson's
Pons	Feeling/moving face Auditory pathways Coma (because reticular activating system involved in brain arousal is located here)
Medulla	Death – because vagus nerve synapses here (involved in BP, HR, etc)

MIT OpenCourseWare
<http://ocw.mit.edu>

7.29J / 9.09J Cellular Neurobiology
Spring 2012

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.