Spinal cord nuclei			
	Renshaw cells	Inhibit **alpha motor neurons** through a negative feedback (alpha → ↑Renshaw →- ↓alpha)	Target for tetanus toxins → prevent release of glycine from Renshaw cells → tetanic contraction
	SGR (Substancia Gelatinosa of Rolandi)	Second order neuron for **STT** Projects to thalamic VPM nucleus Pain can be modulated by its opioid receptors.	
	Marginal nucleus	Receives input from **Lissauer's** tract and relay pain and temperature. Pain can't be modulated at this level.	
	Nucleus proprius	Second order neuron for **STT** projects to spinal and supraspinal relay centers	
	Interomediolateral nucleus	Extends from T1-L2 Give **presynaptic sympathetic** fibers	
	Clark's nucleus	Extends from T1-L4 Relay **proprioception** from muscle spindles to cerebellar cortex via dorsal spino-cerebellar tract.	
	Onuf's nucleus	Present in anterior horn of sacral region Innervates **voluntary external urethral sphincter**	Preserved in MND Affected in Shy-Drager disease

Spinal cord Tracts			
S	**Posterior column**	Proprioception (position), pressure, vibration and fine touch	
E	**Lateral Spinothalamic**	Pain and temperature	
N	**Anterior Spinothalamic**	Crude touch	
S	**Dorsal & Ventral Spinocerebellar**	Proprioception from ipsilateral caudal part of body and leg.	
O	**Cuneocerebellar**	Proprioception from ipsilateral arm	
R	**Spinoreticular**	Responsible for arousal and alertness response to pain	
Y	**Spino-olivary**	Conveys proprioception to the olivary nucleus then to the cerebellum	
M	**Anterior Corticospinal**	Controls the movements of axial muscles	
O	**Lateral Corticospinal**	Controls the fine movements of the limbs	
T	**Rubrospinal**	Controls large muscle and fine movements of upper limb	Facilitates flexor tone Can increase in size and assume functions of th corticospinal tract in case of pyramidal lesion
O	**Vestibulospinal**	Maintains head and eye coordination, upright posture and balance	Facilitates extensor tone→ keep upright positior
R	**Tectospinal**	Mediates reflex postural movements of the head in response to visual and auditory stimuli.	
	Reticulospinal	Coordinate automatic movements of locomotion and posture Mediates withdrawal to painful stimuli	Inhibited by corticospinal tract. Causes Decerebrate rigidity in case of lesion below red nucleus.