Deep Tendon Reflexes

Upper Extremity

Reflex	Mech	Response	Nerve supply
Biceps	Tapping over a finger placed on the biceps tendon while arm semi-flexed ***Exaggerated reflex:***	Elbow flexion Increased reflexogenic zone (tapping the clavicle) Reflex spread (finger flexion)	C 5-6
Brachioradialis	Tapping just above the styloid process of the radius with the forearm in semiflexion ***Inverted Supinator reflex:*** Cervical myelopathy (cord compression) with C5-6 radiculopathy (absent biceps contraction)	Elbow flexion ± supination Flexion of fingers without elbow flexion ± elbow extension	C 5-6
Triceps	Tapping the triceps tendon just above its insertion on the olecranon process ***Inverted triceps reflex:***	Elbow extension Elbow flexion. In combined cord lesion above C5 and radiculopathy of C7-8	C 7-8
Finger flexor "Wartenberg sign"	Patient's hand is supine, resting on a table or a solid surface. Place your fingers against the patient's fingers, and tap the backs of his own fingers	Flexion of fingers and the distal phalanx of thumb	C8 – T1
Hoffmann **Tromner**	Hold the middle finger with your index and thumb then nip or snap the nail of the middle finger (down). Snap the belly of the distal phalanx instead (up).	Adduction of the thumb and flexion of the index finger	C8 – T1
Scapulohumeral	Tapping over the vertebral border of the scapula	Retraction of the scapula Contraction of rhomboids	C 4-5 Dorsal scapular
Deltoid	Tapping over the insertion of the deltoid muscle at the lateral aspect of the humerus.	Slight arm abduction	C 5-6 Axillary
Pectoralis	Tapping over a finger placed on the insertion of pectoralis at the greater tuberosity of humerus	Slight adduction & internal rotation	C5 – T1 Pectoral Ns
Latissimus Dorsi	Tapping over a finger placed on the insertion of Latissimus at intertubercular groove of the humerus	Slight abduction & internal rotation	C 6-8 Thoracodorsal
Clavicular	Tapping over the lateral border of the clavicle "A non-specific reflex indicates increased reflexogenic zone. Used to compare reflexes in both UL"	Contraction of various muscle groups in the upper limb	
Wrist Extension	Tapping the extensor tendons of the wrist with wrist hanging down	Wrist extension	

Lower Extremity

Reflex	Mech	Response	Nerve supply
Patellar	Place one hand over the muscle, and with the other hand tap the patellar tendon just below the patella. ***Exaggerated reflex:*** ***Inverted Patellar reflex:***	Knee extension Increased reflexogenic zone (tapping suprapaterllar) Reflex spread (hip adduction) Knee flexion instead of extension due to femoral or L2-4 root lesions.	L2-4 Femoral
Achilles	Place the patient's legs in a figure four position, with mild dorsiflexion exerted on the ankle, tap over the Achilles tendon.	Planter flexion of the ankle	S1 Tibial nerve
Adductor	With the thigh in slight abduction, tap over the adductor tubercle (above medial epicondyle) ***Crossed Adductor:*** ***Spinal adductor reflex:***	Ipsilateral thigh adduction Adduction of opposite thigh. Slight adduction is not abnormal but strong adduction is pathological. Tapping the spinous process if lumbar vertebra causes adductor response.	L2-4 Obturator
Internal Hamstrings	Tapping on examiner's fingers placed on the medial part of posterior aspect of the knee while leg is abducted and laterally rotated.	Knee flexion	L5 Tibial portion of sciatic
External Hamstrings	Tapping on examiner's fingers placed on the lateral part of posterior aspect of the knee while leg is flexed Another S1 reflex (besides Ankle jerk) which helps with sorting out absent ankle reflex due to neuropathy (present) from S1 radiculopathy (present)	Knee flexion	S1 Tibial portion of sciatic
Tensor Facia Lata	Tapping near the ASIS	Slight hip abduction	L4-S1 Sup Gluteal
Gluteal	Tapping over the posterior aspect of the ilium bone	Hip extension & gluteal contraction	L5-S2 Inf gluteal