

**Patient History / Exam:**

Right upper extremity fasciculations and hand weakness. Has preserved reflexes and sensation.

**NCV & EMG Findings:**

Evaluation of the right Median (APB) motor nerve showed prolonged distal onset latency (4.4 ms). The right Radial (EIP) motor nerve showed reduced amplitude (4.1 mV) and decreased conduction velocity (59 m/s). All remaining nerves (as indicated in the following tables) were within normal limits.

Needle evaluation of the right deltoid muscle showed increased insertional activity, slightly increased spontaneous activity, increased motor unit amplitude, and diminished recruitment. The right Ext Digitorum Communis muscle showed increased insertional activity, slightly increased spontaneous activity, increased motor unit amplitude, moderately increased polyphasic potentials, diminished recruitment, and moderately decreased interference pattern. The right First Dorsal Interosseous muscle showed increased insertional activity, slightly increased spontaneous activity, increased motor unit duration, moderately increased polyphasic potentials, diminished recruitment, and moderately decreased interference pattern. The right Abductor Pollicis Brevis muscle showed increased insertional activity, slightly increased spontaneous activity, increased motor unit duration, diminished recruitment, and moderately decreased interference pattern. All remaining muscles (as indicated in the following table) showed no evidence of electrical instability.

**Impression:**

Diffuse fasciculations on upper and lower extremities along with subacute and chronic denervation on right upper extremity, indicating lower motor neuron dysfunction in cervical and lumbosacral segments.

## NCS+

### Motor Nerve Results

	Latency		Amplitude		F-Lat	Segment	Distance	CV		Comment
Site	(ms)	Norm	(mV)	Norm	(ms)		(cm)	(m/s)	Norm	
Right Median (APB)										
Wrist	4.4	< 4.2	6.3	> 4.1	29.7					
Elbow	9.2	-	5.2	-		Elbow-Wrist	27	56	> 49	
Axilla	12.6	-	5.5	-		Axilla-Elbow	20	59	-	
Erb's Pt.	14.9	-	5.0	-		Erb's Pt.-Axilla	-	-	-	
Right Ulnar (ADM)										
Wrist	3.1	< 3.7	6.4	> 5.0	31.3					
Bel Elbow	7.1	-	6.0	-		Bel Elbow-Wrist	23	58	> 52	
Abv Elbow	9.1	-	6.1	-		Abv Elbow-Bel Elbow	10	50	> 43	
Erb's Pt.	14.3	-	4.6	-		Erb's Pt.-Abv Elbow	-	-	-	
Right Radial (EIP)										
Forearm	2.8	< 2.9	4.1	> 20.0						
Up Arm	5.6	-	3.2	-		Up Arm-Forearm	16.5	59	> 67	
Erb's Pt.	10.4	-	4.2	-						
Left Fibular (EDB)										
Ankle	3.9	< 6.5	6.9	> 1.30						
Bel Fib Head	11.8	-	6.1	-		Bel Fib Head-Ankle	37	47	> 38	
Left Tibial (AHB)										
Ankle	4.6	< 6.5	10.8	> 4.4						
Knee	13.4	-	8.7	-		Knee-Ankle	41	47	> 39	

### Sensory Sites

Site	Start Lat ms	Amplitude µV	Comment
<b>Right Median (Rec:Dig III)</b>			
Mid Palm	2.7	67	
<b>Right Ulnar (Rec:Dig V)</b>			
Wrist	2.7	44	
<b>Right Radial (Rec:Wrist)</b>			
Forearm	1.58	39	
<b>Left Sural (Rec:Lat Mall)</b>			
Calf	3.2	16	

### Sensory Segments

Segment	Delta-O ms	Distance (cm)	Start CV	
			m/s	Norm
<b>Right Median</b>				
Mid Palm-Dig III		14	52	-
<b>Right Ulnar</b>				
Wrist-Dig V		14	52	> 50
<b>Right Radial</b>				
Forearm-Wrist		10	63	-
<b>Left Sural</b>				
Calf-Lat Mall		14	44	> 40

## EMG+

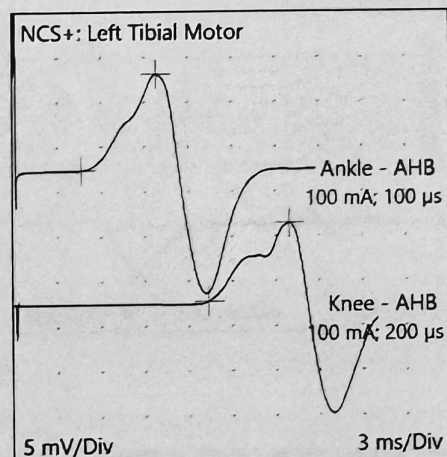
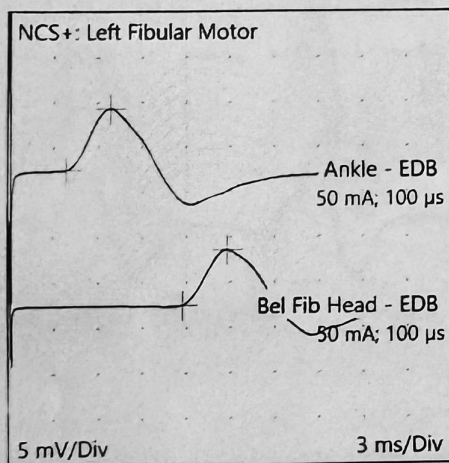
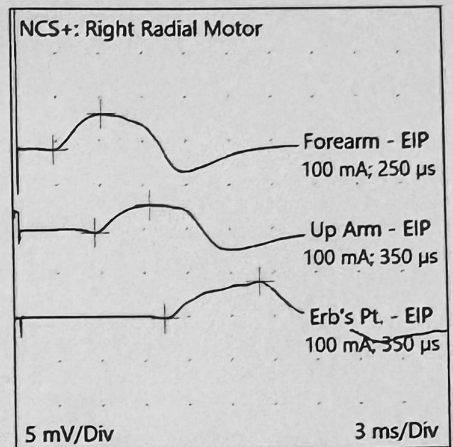
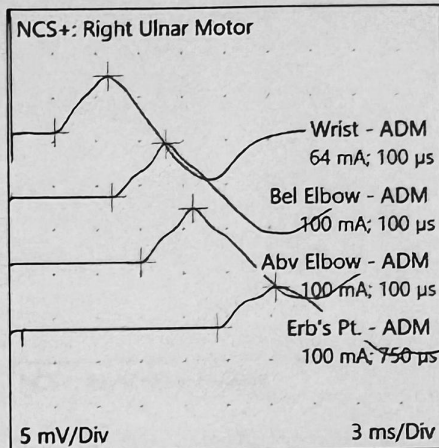
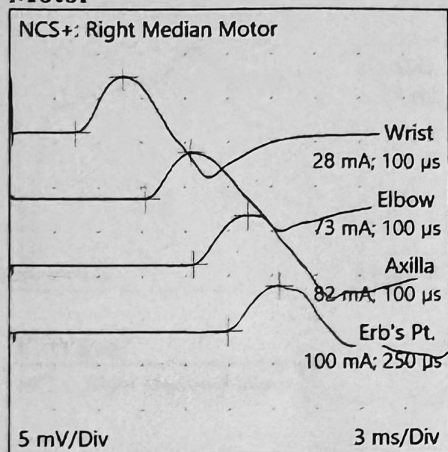
Side	Muscle	Nerve	Root	Ins Act	Fibs	Psw	Amp	Dur	Poly	Recrt	Int Pat	Comment
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Right	Deltoid	Axillary	C5-C6	<b>Incr</b>	<b>1+</b>	<b>1+</b>	<b>Incr</b>	Nml	0	<b>Reduced</b>	Nml	Fascics
Right	Biceps	Musculocut	C5-C6	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	Fascics
Right	Triceps	Radial	C6-C8	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	Fascics
Right	EDC	Radial, Posterior In.,,	C7-C8	<b>Incr</b>	<b>1+</b>	<b>1+</b>	<b>Incr</b>	Nml	<b>2+</b>	<b>Reduced</b>	<b>75%</b>	Fascics
Right	FDI	Ulnar	C8-T1	<b>Incr</b>	<b>1+</b>	<b>1+</b>	Nml	<b>&gt;12ms</b>	<b>2+</b>	<b>Reduced</b>	<b>75%</b>	Fascics
Right	APB	Median	C8-T1	<b>Incr</b>	<b>1+</b>	<b>1+</b>	Nml	<b>&gt;12ms</b>	0	<b>Reduced</b>	<b>75%</b>	Fascics
Right	Tib Anterior	Fibular, Deep Fibula.,,	L4-L5	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	Fascics
Right	Gastroc MH	Tibial	S1-S2	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	Fascics
Right	Vastus Lat	Femoral	L2-L4	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	Fascics
Left	Tib Anterior	Fibular, Deep Fibula.,,	L4-L5	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	Gastroc MH	Tibial	S1-S2	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	Fascics
Left	Vastus Lat	Femoral	L2-L4	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	FDI	Ulnar	C8-T1	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	Fascics
Left	APB	Median	C8-T1	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	Deltoid	Axillary	C5-C6	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	Fascics

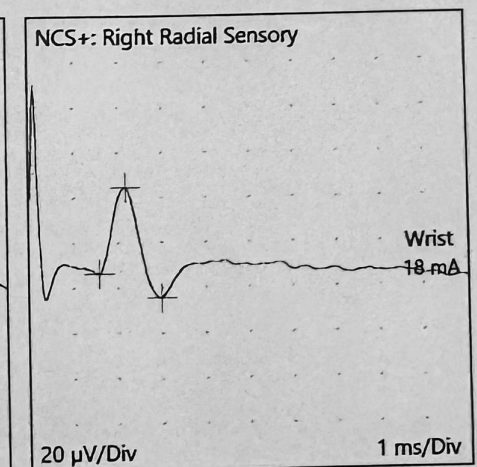
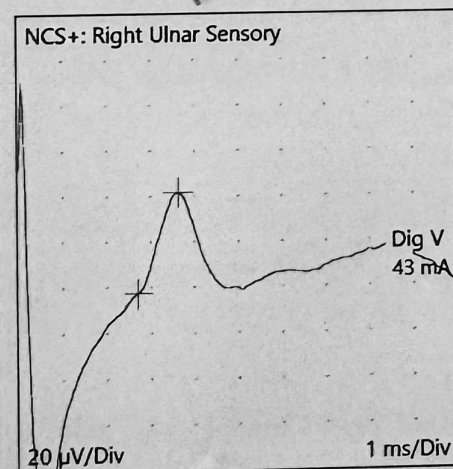
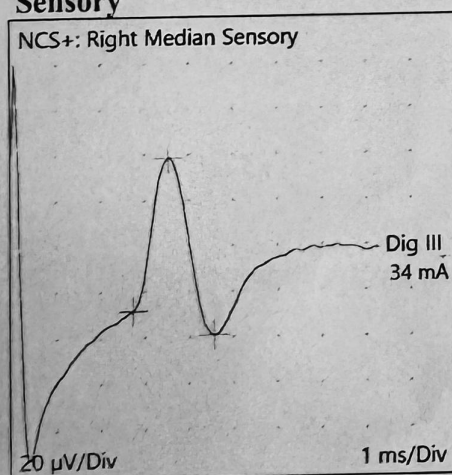


## Waveforms:

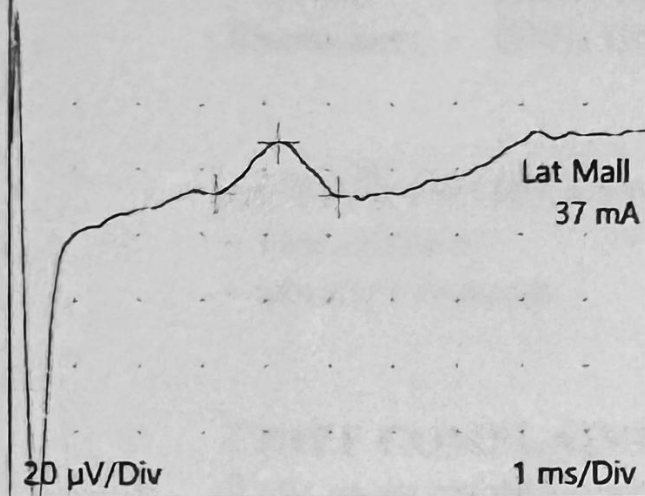
### Motor



### Sensory

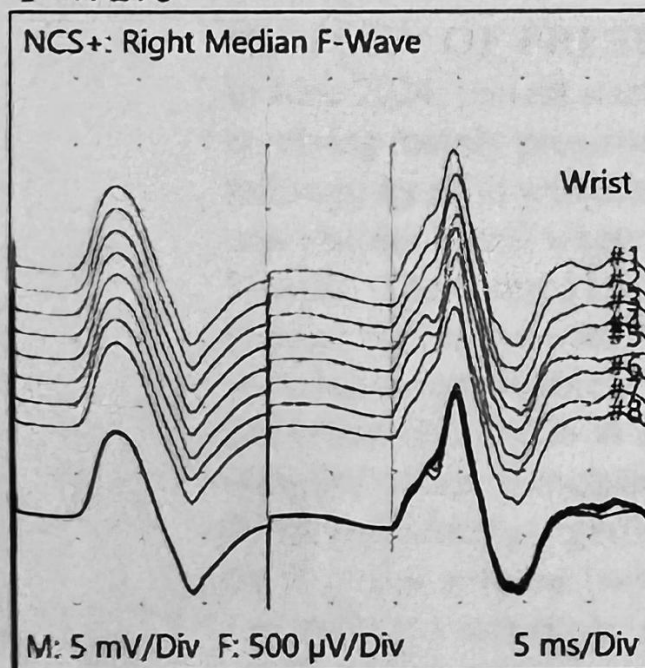


NCS+: Left Sural Sensory



F-Wave

NCS+: Right Median F-Wave



NCS+: Right Ulnar F-Wave

