

**SI PHYSICAL THERAPY, PC**  
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<b>Patient:</b>	TOHID CHOWDHURY	<b>DOB:</b>	9/11/1980	<b>Physician:</b>	IBRAHIM ABDELFATAH P.T
<b>Sex:</b>	Male	<b>Height:</b>	5' 4"	<b>Weight:</b>	130 lbs.

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**ELECTROMYOGRAPHY AND NERVE CONDUCTION VELOCITY REPORT  
LOWER EXTREMITIES**

**Introduction:**

Nerve Conduction velocity (NCV) and electromyography (EMG) studies are commonly performed in the evaluation of neuromuscular disorders. NCV/EMG's provide an objective measurement of the presence and severity of peripheral nerve dysfunction, localization, distribution and underlying pathophysiology. In conjunction with a clinical evaluation and imaging studies, NCV/EMG's can assist a physician in the diagnosis, prognosis and treatment of various disease processes.

**Technical aspects:**

The NCV is performed with surface mounted electrodes, water soluble hypoallergenic gel and standard stimulation and recording techniques. The EMG is performed with disposable 37mm X 27ga monopolar needle electrodes at the standards insertion sites. All extremities are warm during the recording process. All studies are performed on a Cadwell digital NCV/EMG unit.

**Clinical correlation:**

The reader is referred to the separate accompanying report for clinical information. It is the responsibility of the treating physician to apply the results of the NCV/EMG testing to patient's treatment program. There may be isolated abnormalities and/or technical limitations identified in this study. These will not be addressed in the impression unless clinically warranted.

**Medical Necessity:** Rule out Lumbosacral Radiculopathy/ Polyneuropathy

The patient's symptoms and neurological signs raise the possibility of peripheral nervous system (spinal cord, nerve roots, peripheral nerves) injury (irritation, compression, stretching). Neurophysiological testing is intended to clarify this clinical suspicion and differentiate nerve root lesion from peripheral nerve lesion. Abnormal NCV and EMG correlate with less favorable prognosis of recovery and are helpful in further clinical management. If there are signs of focal demyelination and nerve conduction block, the patient may benefit from surgical intervention. If there is diffuse denervation, prognosis of functional recovery is unfavorable. (For details see the actual report)

**CHIEF COMPLAINTS:**

Patient is a 40 year old Male who presents with lower back pain radiating to the legs, numbness and tingling in the feet. These symptoms have been present for months.



## Nerve Conduction Studies

## Anti Sensory Summary Table

Site	NR	Onset (ms)	Norm Onset (ms)	Norm Peak (ms)	Peak (ms)	O-P Amp (µV)	Norm O-P Amp	P-T Amp (µV)	Site1	Site2	Delta-0 (ms)	Dist (cm)	Vel (m/s)	Norm Vel (m/s)
<b>Left Sup Peron Anti Sensory (Ant Lat Mall)</b>														
Low Leg		2.3	<3		2.9	3.9	>10	35.9	Low Leg	Ant Lat Mall	2.3	14.0	61	>40
<b>Right Sup Peron Anti Sensory (Ant Lat Mall)</b>														
Low Leg		1.6	<3		2.3	22.6	>10	9.9	Low Leg	Ant Lat Mall	1.6	14.0	88	>40
<b>Left Sural Anti Sensory (Lat Mall)</b>														
Calf		2.0	<3		2.6	14.3	>10	20.0	Calf	Lat Mall	2.0	14.0	70	>40
<b>Right Sural Anti Sensory (Lat Mall)</b>														
Calf		2.5	<3		3.0	12.5	>10	21.3	Calf	Lat Mall	2.5	14.0	56	>40

## Motor Summary Table

Site	NR	Onset (ms)	Norm Onset (ms)	O-P Amp (mV)	Norm O-P Amp	P-T Amp (mV)	Site1	Site2	Delta-0 (ms)	Dist (cm)	Vel (m/s)	Norm Vel (m/s)
<b>Left Peroneal Motor (Ext Dig Brev)</b>												
Ankle		3.8	<6.1	3.2	>2.5	5.5	B Fib	Ankle	6.7	33.0	49	>40
B Fib		10.5		3.0		4.9						
<b>Right Peroneal Motor (Ext Dig Brev)</b>												
Ankle		2.7	<6.1	4.2	>2.5	6.2	B Fib	Ankle	6.7	33.0	49	>40
B Fib		9.4		3.6		5.3						
<b>Left Tibial Motor (Abd Hall Brev)</b>												
Ankle		5.3	<6.1	9.2	>3	14.4	Poplit	Ankle	8.3	38.5	46	>40
Poplit		13.6		8.9		12.5						
<b>Right Tibial Motor (Abd Hall Brev)</b>												
Ankle		5.0	<6.1	12.7	>3	19.7	Poplit	Ankle	7.7	38.0	49	>40
Poplit		12.7		8.6		13.5						

## H Reflex Studies

NR	H-Lat (ms)	L-R H-Lat (ms)	L-R Lat Norm
<b>Left Tibial (Gastroc)</b>			
	28.40	0.00	<1.5
<b>Right Tibial (Gastroc)</b>			
	28.40	0.00	<1.5

## EMG

Side	Muscle	Nerve	Root	Ins Act	Fibs	Psw	Amp	Dur	Poly	Recrt	Int Pat	Comment
Left	Ext Dig Brev	Dp Br Peron	L5, S1	Nml	0	0	Nml	Nml	Nml	Nml	Complete	
Right	Ext Dig Brev	Dp Br Peron	L5, S1	Inc	0	0	Nml	Nml	Nml	Nml	Complete	
Right	AntTibialis	Dp Br Peron	L4-5	Nml	0	0	Nml	Nml	Nml	Nml	Complete	
Left	AntTibialis	Dp Br Peron	L4-5	Nml	0	0	Nml	Nml	Nml	Nml	Complete	
Right	Gastroc			Inc	1+	0	Nml	Nml	Nml	Nml	Complete	
Left	Gastroc			Nml	0	0	Nml	Nml	Nml	Nml	Complete	
Left	Peroneus Long	Sup Br Peron	L5-S1	Nml	0	0	Nml	Nml	Nml	Nml	Complete	
Right	Peroneus Long	Sup Br Peron	L5-S1	Inc	1+	0	Nml	Nml	Nml	Nml	Complete	
Left	BicepsFemL	Sciatic	L5-S2	Nml	0	0	Nml	Nml	Nml	Nml	Complete	
Right	BicepsFemL	Sciatic	L5-S2	Nml	0	0	Nml	Nml	Nml	Nml	Complete	

## Paraspinal EMG

Side	Muscle	Nerve	Root	Ins Act	Fibs	Psw	Comment	Poly	Int Pat
Right	L3-4 Parasp	Rami	L3-4	Nml	0	0		Nml	Complete
Left	L3-4 Parasp	Rami	L3-4	Nml	0	0		Nml	Complete

Left	L4-5 Parasp	Rami	L4-5	Nml	0	0	Nml	Complete
Right	L4-5 Parasp	Rami	L4-5	Nml	0	0	Nml	Complete
Left	L5-S1Parasp	Rami	L5-S1	Nml	0	0	Nml	Complete
Right	L5-S1Parasp	Rami	L5-S1	Inc	1+	0	Nml	Complete

**FINDINGS:**

Evaluation of the Left superficial peroneal sensory nerve showed reduced amplitude (3.9  $\mu$ V). The Left peroneal motor, the Right peroneal motor, the Left tibial motor, the Right tibial motor, the Right superficial peroneal sensory, the Left sural sensory, and the Right sural sensory nerves were unremarkable.

EMG needle evaluation of the Right extensor digitorum brevis showed increased Ins Act. The Right gastroc, the Right peroneus longus, and the Right L5-S1Parasp showed increased Ins Act and slightly increased spontaneous activity. All remaining muscles (as indicated in the EMG scoring table) showed no evidence of electrical instability.

**IMPRESSIONS:**

The above eletrodiagnostic study reveals evidence of right L5 - S1 nerve rote irritation.



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Waveforms:





