# Practice Toolkit

# Report Sample

elping physicians improve the quality of their reports is a key goal for AANEM in 2011. The report template below is based on the AANEM's educational paper Reporting the Results of Needle EMG and Nerve Conduction Studies. A report template helps the EDX physician adhere to and document required procedures —by checking them off a list. This process will help the EDX physician complete a thorough analysis of the patient's history,

physical, and EDX data that will improve diagnostic accuracy and result in quality patient care. The template also will help laboratories applying for the laboratory accreditation program meet the criteria used to evaluate EDX reports. The template was developed listing the key elements for a EDX standard report excluding F-wave, H-reflex, and repetitive stimulation studies. Physicians are strongly urged to utilize this template to improve their reports.

Name: Patient Name: Address: Patient Address: Patient ID: Gender: Date of Birth: Height/Weight: Examination Date: 01234 female 01/01/65 ' 300lbs 01/10/11

Reason for Referral

**Physical Exam** 

Description of History and

Referring Physician: Dr. X

#### **History and Physical Examination**

A 46-year-old female was referred for an EDX examination because of increasing problems with numbness in tingling in her left hand over the last 3 years. The patient notes numbness during the day when gripping the steering wheel of her car. She has been waking during the night with pain or paresthesias in the left hand relieved by shaking the hand.

Her past history is significant for a successful right carpal tunnel release 3 years ago for similar symptoms. She had a right sided mastectomy for breast cancer 10 years ago. A brief general examination was remarkable for lymphedema of the right upper extremity and a well healed scar over the right carpal tunnel. A brief neurological examination demonstration normal deep tendon reflexes, normal strength and sensation in both upper extremities.

The EDX studies were performed to evaluate for a left carpal tunnel syndrome

#### **NCS Examination**

For sensory nerve conduction studies, the amplitude is measured peak-to-peak, the latency reported is the distal peak latency, and the conduction velocity, if measured, is determined from onset latencies and is over the forearm.

For motor nerve conduction studies, the amplitude is measured baseline-to-peak, the latency reported is the distal onset latency, the conduction velocity is calculated over the forearm, and the F wave latency is the minimum latency.

Unless otherwise noted, the hand temperature was monitored continuously and remained between 32°C and 36°C during the performance of the NCSs.

SENSORY AND MOTOR NERVE CONDUCTION STUDIES (shaded results are abnormal)*											
Type of Study	Side/ Nerve	Stimulation Site	Recording Site	Distance	AMP	Reference Normal Values	Latency	Reference Normal Values	Conduction Velocity	Refere nce Normal Values	
Sensory	Left Median	Index	Wrist	13 cm	14	(>10 µV)	3.5	(<3.6 ms)			
Sensory	Left Median	Palm	Wrist	8 cm	55	(>20 μV)	2.5	(<2.3 ms)			
Motor	Left Median	Wrist	APB	7 cm	13.5	(>4.0 mV)	4.1	(<4. 5ms)			
Motor	Left Median	Elbow/Wrist	APB	24	12.9	(>4.0 mV)	8.3		59	(>49 m/s)	

#### **EMG Examination**

The study was performed with a concentric needle electrode. Fibrillation and fasciculation activity is graded from none (0) to continuous (4+). The configuration and recruitment pattern of motor unit action potentials under voluntary control, if not normal, are described below.

Needle EMG Results*												
		S	pontaneous A	ctivity	Voluntary Activity							
Side	Muscle	Insertional Activity	Positive Sharp Waves	Fibrillation	Fasciculation	Amplitude	Duration	Polyphasics	Recruitment			
Left	Pronator Teres	Normal	0	0	0	Normal	Normal	None	Normal			
Left	Flexor Pollicis Longus	Normal	0	0	0	Normal	Normal	None	Normal			
Left	Abductor Pollicis Brevis	Normal	0	0	0	Normal	Normal	None	Normal			

#### Findings\*

(\*The results of the NCSs on the left ring finger study for CTS and left ulnar are not included due to space considerations. In addition, the EMG results for the othe upper extremity muscles, biceps, triceps, flexor carpi ulnaris, abductor digiti quinti, and first dorsal interosseous are not included.)

- The left median sensory conduction study was ABNORMAL: the peak latency was prolonged with orthodromic stimulation of the ring finger and the palm.
- The left median motor conduction study was normal.
- The left ulnar sensory conduction study was normal.
- The left ulnar motor conduction study was normal.
- Needle examination with a concentric needle electrode of selected muscles of the left upper extremity was normal.

### **Diagnostic Interpretation**

The study was ABNORMAL.

The findings were compatible with a diagnosis of median nerve pathology at the left wrist affecting primarily the median sensory fibers in the carpal tunnel segment.

There was no electrodiagnostic evidence of more proximal median nerve pathology or ulnar nerve pathology.

### Notes

Right upper limb comparison studies were not performed due to lymphedema following right complete mastectomy and a history of a previous right carpal tunnel release.

In comparison with prior EDX studies of the left upper limb, which were reported to the patient as normal, today's study demonstrates median sensory neuropathy at the wrist consistent with a clinical diagnosis of a mild left CTS.

Limb Temperature

## Tabular NCS Data:

- Side & Nerve
- Stimulation & Recording Site
- SNAP/CMAP Amplitude
- Peak Latency
- Conduction Velocity
- Reference Values

## Tabular EMG Data:

- Side
- Muscle Tested
- Activity Data
  - Voluntary
  - Insertional
  - Spontaneous

Description of Findings

Probable Diagnosis & Location of Pathology

Study Limitations & Previous Study Information