

## Notice of Independent Review Decision

### DATE OF REVIEW:

08/24/2009

### IRO CASE #:

### DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE

Electromyogram (EMG) of the left upper extremity.

### A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION

Doctor of Osteopathy, Board Certified Anesthesiologist, Specializing in Pain Management

### REVIEW OUTCOME

Upon independent review the reviewer finds that the previous adverse determination/adverse determinations should be: **Upheld**

Provide a description of the review outcome that clearly states whether or not medical necessity exists for each of the health care services in dispute.

**The requested electromyogram (EMG) is not medically necessary.**

### INFORMATION PROVIDED TO THE IRO FOR REVIEW

- referral form
- 08/07/09 Referral
- 08/07/09 Notice of Assignment of Independent Review Organization, , DWC
- 08/07/09 Notice To Utilization Review Agent of Assignment, , DWC
- 08/07/09 Notice To MCMC, LLC Of Case Assignment, , DWC
- 08/06/09 Confirmation Of Receipt Of A Request For A Review, DWC
- 08/06/09 Request For A Review By An Independent Review Organization
- 07/29/09 memo from , M.D. with memo dated 07/27/09 from , Preauthorization Representative
- 07/28/09 Preauthorization Request – Notice of Non-Authorization, , M.D.
- 07/24/09 Pre-Authorization Worksheet, , M.D.
- 07/24/09 letter from , M.D.,
- 07/22/09 Preauthorization Request – Notice of Non-Authorization, , M.D.
- 07/22/09 note from , M.D.
- 07/20/09 fax cover sheet with note from
- 07/20/09 Pre-Authorization Worksheet, , M.D.
- 03/30/09, 04/30/09, 08/06/09 office notes, , M.D.,
- Handwritten chart note (complete page not visible)
- Note: Carrier did not supply ODG Guidelines

### PATIENT CLINICAL HISTORY [SUMMARY]:

The injured individual is a xx year old male who fell off a ladder. He complained of headache, chest pain and some intermittent left arm numbness. The injured individual had MRIs and CTs but these

are not documented. The attending provider saw him four times and never documented any positive carpal tunnel syndrome (CTS) or cervical radicular findings.

### **ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION.**

The attending provider saw the injured individual multiple times. There is no mention of the MRI or CT. None of the notes have any positive cervical or left arm radicular findings and most have no mention of this exam being done. The attending provider states he requested the EMG to rule out CTS but there is no exam documenting any suspicion of CTS. There is no clinical evidence to support the EMG.

### **A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:**

#### **ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES**

Official Disability Guidelines:

Recommended (needle, not surface) as an option in selected cases. The American Association of Electrodiagnostic Medicine conducted a review on electrodiagnosis in relation to cervical radiculopathy and concluded that the test was moderately sensitive (50%-71%) and highly specific (65%-85%). ([AAEM, 1999](#)) EMG findings may not be predictive of surgical outcome in cervical surgery, and patients may still benefit from surgery even in the absence of EMG findings of nerve root impingement. This is in stark contrast to the lumbar spine where EMG findings have been shown to be highly correlative with symptoms.

*Positive diagnosis of radiculopathy:* Requires the identification of neurogenic abnormalities in two or more muscles that share the same nerve root innervation but differ in their peripheral nerve supply.

*Timing:* Timing is important as nerve root compression will reflect as positive if active changes are occurring. Changes of denervation develop within the first to third week after compression (fibrillations and positive sharp waves develop first in the paraspinals at 7-10 days and in the limb muscles at 2-3 weeks), and reinnervation is found at about 3-6 months

*Acute findings:* Identification of fibrillation potentials in denervated muscles with normal motor unit action potentials (usually within 6 months of symptoms: may disappear within 6 weeks in the paraspinals and persist for up to 1-2 years in distal limbs).

*Chronic findings:* Findings of motor unit action potentials with increased duration and phases that represent reinnervation. With time these become broad, large and polyphasic and may persist for years.

*Anatomy:* The test primarily evaluates ventral (anterior) root function (motor) and may be negative if there is dorsal root compression (sensory) only. Only C4-8 and T1 in the neck region have limb representation that can be tested electrodiagnostically. The anatomic basis for this lies in the fact that the cervical nerve roots have a motor and a sensory component. It is possible to impinge the sensory component with a herniated disc or bone spur and not affect the motor component. As a result, the patient may report radicular pain that correlates to the MRI without having EMG evidence of motor loss.

*Paraspinal fibrillation potentials:* May be seen in normal individuals and are nonspecific for etiology. The presence of these alone is insufficient to make a diagnosis of radiculopathy and they may be absent when there is a diagnosis of radiculopathy secondary to sampling error, timing, or because they were spared. They may support a diagnosis of radiculopathy when corresponding abnormalities are present in the limb muscles.

*Indications when particularly helpful:* EMG may be helpful for patients with double crush phenomenon, in particular, when there is evidence of possible metabolic pathology such as

neuropathy secondary to diabetes or thyroid disease, or evidence of peripheral compression such as carpal tunnel syndrome.

*H-reflex*: Technically difficult to perform in the upper extremity but can be derived from the median nerve. The test is not specific for etiology and may be difficult to obtain in obese patients or those older than 60 years of age.

([Negrin, 1991](#)) ([Alrawi, 2006](#)) ([Ashkan, 2002](#)) ([Nardin, 1999](#)) ([Tsao, 2007](#)) See [Discectomy-laminectomy-laminoplasty](#). (Surface EMG and F-wave tests are not very specific and therefore are not recommended. For more information on surface EMG, see the [Low Back Chapter](#).)