



# Authentic4D™

Make better decisions confidently

## NEWSLETTER

### 1. Not Assessing Limb Temperature

Think of molasses on a cold day. It moves a lot more slowly than if it is left out in a grocery bag in a hot car for a few hours. The same concept applies to conduction velocity in an EMG Nerve Conduction Study (NCS/NCV). Conduction velocity is a paramount measurement in assessing nerve health. A nerve must conduct electricity along its length at a minimum speed to be considered normal. If it does not, this can indicate pathology such as carpal tunnel syndrome. To avoid false positives and get accurate results for an NCS, you must warm the upper limbs to a minimum of 32 degrees Celsius and the lower limbs to a minimum of 30 degrees Celsius.

### 2. Having Medically Impossible Values

A nerve's amplitude or amount of response to a stimulus is another factor that is assessed in an NCS to determine nerve health. Healthy motor nerve amplitudes range from 2 to 16 or more and are measured in millivolts. Normal sensory nerve amplitudes are in microvolts and can range from 10 to 100. A decrease in amplitude is a sign of nerve damage. The more severe the damage, the lesser the amplitude. When a nerve is essentially "dead" or severed in two, the amplitude will be zero. It is a medical impossibility for a nerve's amplitude to be less than zero, yet some poor-quality or fraudulent EMG providers do not assess their work to correct such an error. Even worse, a provider may not know that a negative amplitude is not possible or they simply don't care because the EMG is just a source of revenue for them and not a tool to provide quality patient care.

### 3. Ignoring the Paraspinal Muscles

The paraspinals are muscles in the back on either side of the spinal column. They are responsible for helping you do things like bend and twist. When a radiculopathy is present, these muscles are affected. In order to diagnose a radiculopathy, it is required that these muscles are examined on the needle EMG. A diagnosis of radiculopathy is considered reliable when there are changes seen in the paraspinals as well as two other limb muscles.

If this all sounds complicated, it's because it is. Have one of our experts help with EMG claims resolution today. Click [here](#) to submit a case.

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