

A-DELTA PAIN FIBER NERVE CONDUCTION IDENTIFIES PERIPHERAL NEUROPATHY

Robert Odell, MD , PhD
Neuropathy & Pain Center of Las Vegas

- In 2000, it was discovered that A-delta fibers down-regulate soon after injury while C fibers (slow pain) up-regulate
- By measuring the voltage required to cause A-delta voltage-gated channels to fire threshold action potentials in the nerves in a region, one can locate the injured nerve

Conclusion: Identification of mono- and/or polyneuropathy becomes straightforward utilizing this simple sensory test.



Normal Test



Mild Neuropathy



Severe Neuropathy

- In length dependent peripheral neuropathy, the longer nerves are usually the most affected.
- Severity of neuropathy measured is usually related to distance of measuring point on nerve form the dorsal root ganglion.
- L4 (4" above medial malleolus), L5 (anterior ankle) and S1 (behind the lateral malleolus) the longest paths.