



THERAPATH

DETERMINATION OF EPIDERMAL NERVE FIBER DENSITY (ENFD) IN THE EVALUATION OF SENSORY NEUROPATHY

PATIENT PRESENTATION:

NUMBNESS, PARESTHESIAS, PAIN,
OR SENSORY LOSS



PERFORM NERVE CONDUCTION
AND EMG STUDIES



ABNORMAL

CONFIRMS DIAGNOSIS OF NEUROPATHY;
DEMYELINATING VS. AXONAL.



NORMAL

PERFORM SKIN BIOPSY FOR
ENFD AT CALF AND THIGH



NORMAL

PATIENT MAY HAVE CNS DISEASE,
EARLY/MILD NEUROPATHY, LARGE FIBER
NEUROPATHY, OR RADICULOPATHY



ABNORMAL

CONFIRMS DIAGNOSIS OF
SMALL FIBER NEUROPATHY*

Preferential reduction of ENFD distally at the calf is typical of length-dependent neuropathies, as seen in metabolic, nutritional or toxic conditions.

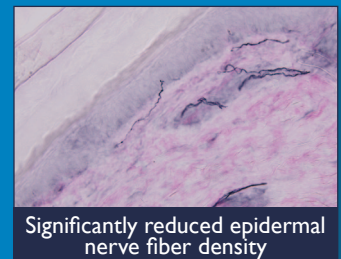
Preferential reduction of ENFD at the thigh can be seen in sensory neuronopathy or multifocal sensory neuropathy, and in association with inflammatory, infectious, or autoimmune conditions.

***Repeat skin biopsy may be used to follow the neuropathy and determine whether it has progressed, stabilized or improved.**

Known causes of small fiber neuropathy include diabetes, glucose intolerance, nutritional deficiencies, toxins, alcohol abuse, sarcoid, sjogren's syndrome, lupus, vasculitis, collagen vascular diseases, celiac disease, lyme disease, HIV-1, amyloidosis, or fabry's disease.



Skin with normal epidermal nerve fiber density



Significantly reduced epidermal nerve fiber density