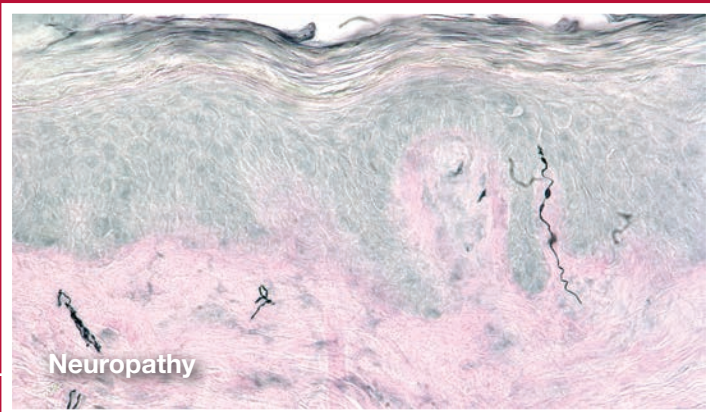
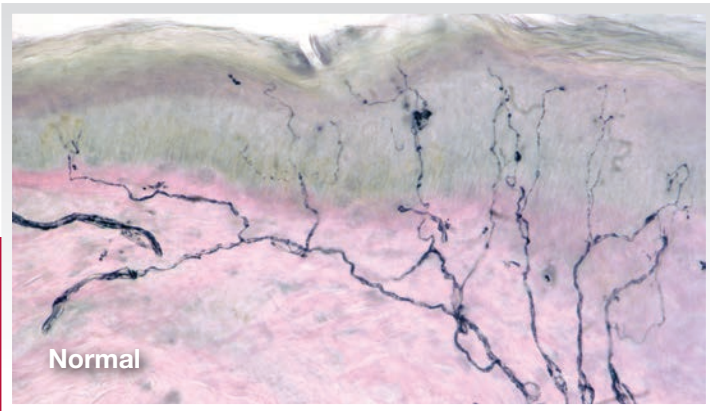




UNIVERSITY OF UTAH
HEALTH CARE

Cutaneous Nerve Laboratory



What is Small Fiber Neuropathy?

Small fiber neuropathy (SFN), or peripheral sensory neuropathy, affects small caliber nerve fibers. This disease most often presents as tingling, burning or numbness in the arms, legs or feet. Patients may also experience sensitivity to temperature (heat or cold) and/or autonomic dysfunction.

Common causes of SFN include: diabetes, HIV, alcohol or drug abuse, and use of neurotoxic agents. Often, the cause of SFN is unknown.

Why Skin Biopsy?

The terminal endings of small nerve fibers in the epidermis are often the first areas to degenerate, with distal to proximal gradients. Small fiber neuropathy may involve single nerves (mononeuropathy) or many nerves (polyneuropathy), often in a length dependent fashion.

Cutaneous nerve evaluation has been used clinically since 1993 and is well tolerated by patients. It is a sensitive, site directed, repeatable technique that reveals both acute and chronic forms of sensory neuropathy.

Biopsy Sites

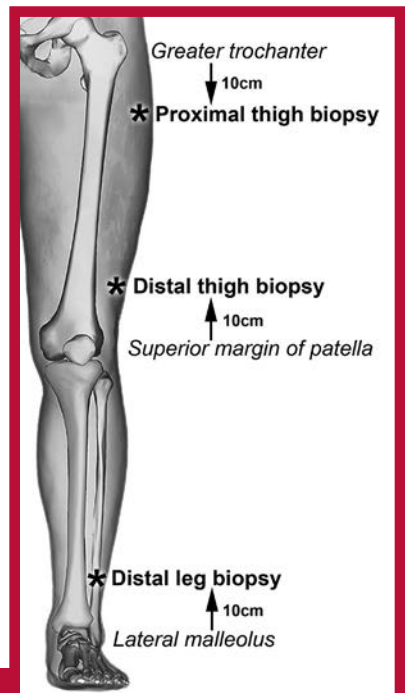
Control data for adults are available at the distal leg, distal and proximal thigh regions.

This test is easily performed in a physician's office or clinic with resultant biopsies being sent to the University of Utah for processing.

Care must be taken to prevent crushing the biopsy when removing it from the patient.

Skin Biopsy Results

The biopsies are sectioned and stained with anti-PGP9.5 antibody which is a neuronal specific marker. This allows the reading physician to analyze the intra-epidermal sensory nerves. Clinical diagnosis is based on the density of these nerves and a report is generated and sent to the referring physician.



Order a Skin Biopsy Kit

Biopsy kits can be ordered by calling the laboratory at **801-585-2461** or via email: biopsy@hsc.utah.edu.

The kits include biopsy tools, specimen vials, a pre-paid return shipping label, and instructional paperwork.

Our Neurology Team



Gordon Smith, MD FAAN

Professor of Neurology and Vice Chair for research at the University of Utah, where he also serves as Chief of the Division of Neuromuscular Medicine and Director of the EMG Laboratory. Dr. Smith has a particular interest in biomarker development and novel clinical trial design in peripheral neuropathy as well as longstanding and ongoing NIH and major foundation funding. He is principal investigator of the Utah Regional site in the NINDS-funded Network for Excellence in Neuroscience Clinical Trials. Dr. Smith is active in the Peripheral Nerve Society, where he is a former member of the board of directors and he currently serves on the board of directors for the American Academy of Neurology and American Brain Foundation.



J. Rob Singleton, MD

Director of Utah Center for Translational and Clinical Science Clinical Services Core, and the Neurophysiology Laboratory at the Salt Lake City Veterans Administration Hospital. He teaches neuromuscular disease diagnosis and electrodiagnostic techniques to Neurology, and Physical Medicine residents, and has helped train 25 Neuromuscular fellows. Dr. Singleton is an NIH funded investigator with expertise in small fiber and metabolic neuropathy and a grant review panelist for the NIH CNNT2 review panel.



Nicholas Johnson, MD

Assistant professor of Neurology, Pediatrics, and Pathology at the University of Utah with a focus in inherited neuromuscular disorders. His research focuses on the disease progression and pathogenesis of myotonic dystrophy, as well as therapeutic trials in myotonic dystrophy and spinal muscular atrophy. He serves as Chair of the Government Relations Committee for the American Academy of Neurology.

Cutaneous Nerve Laboratory

Our laboratory staff has over 25 years combined experience in cutaneous innervation evaluation. Peter Hauer, Lab Manager, pioneered and perfected these techniques, allowing for more sensitive and less invasive testing for SFN. Our staff produces the highest quality slides for evaluation of SFN in the country. Proficiency testing is performed biannually with other world-class institutions to verify the accuracy and reliability of results. Adrienne Aperghis, Lab Specialist, has both regulatory and technical expertise, ensuring the highest industry standards and patient results. The laboratory performs testing at both clinical diagnostic and research trial levels.

Contact Us

Cutaneous Nerve Laboratory, Department of Neurology

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Phone: 801-585-2461
Fax: 801-581-4830
Email: biopsy@hsc.utah.edu

Why choose University of Utah?

- **Board certified neurologists** specializing in cutaneous innervation
- **Personal attention** — speak to qualified lab professionals via phone or email
- **Fast turnaround time** for results
- **Online access** to clinical reports via EPIC Link
- **No charge for biopsy kits** and return shipping
- **Experienced technical staff** and rigorous quality control ensure accurate results

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