Division of Neuromuscular Disease

The UAB Division of Neuromuscular Disease offers clinical, research, and education services to adults with disorders affecting the peripheral nervous system and their central nervous system connections. Over the last 40 years, our UAB division has grown into an internationally recognized center for clinical care, diagnostic clinical neurophysiology, and diagnostic muscle and nerve histopathology.

Our Program
UAB’s neuromuscular specialists are highly-trained neurologists with fellowship training, board certification, and subspecialty expertise in clinical neurophysiology and neuromuscular medicine. Our team provides expert care for patients with a wide variety of neuromuscular diseases such as inflammatory myopathies, muscular dystrophies, neuromuscular junction transmission disorders such as myasthenia gravis (MG) and Lambert-Eaton Myasthenic syndrome (LEMS), inherited and acquired peripheral neuropathies (which affects more than 20 million individuals in the United States), including small fiber neuropathies, plexopathies, radiculopathies as well as disorders affecting motor and sensory neurons. As the only dedicated tertiary care neuromuscular center in the state, our UAB neuromuscular program has the capabilities to diagnose and treat peripheral nervous system disorders using the most current medical techniques.

At UAB, state-of-the-art facilities and equipment are available for diagnostic studies including routine and specialized motor and sensory nerve conduction studies, electromyography, single fiber electromyography, somatosensory, visual and brainstem evoked potentials, surgical procurement of muscle, peripheral nerve and skin punch biopsies, and a full range of histopathological techniques to diagnose neuromuscular disorders.

UAB is home to the Muscular Dystrophy Association (MDA) Clinic, a dedicated clinic for the initial evaluation, diagnosis and treatment of rarely acquired and inherited disorders affecting peripheral nerves, the neuromuscular junction, and muscles. As the only MDA clinic available in Alabama, the clinic serves patients from across the southeast.

The Division also actively participates in a dedicated monthly multidisciplinary clinic staffed by neurologists, speech, physical and occupational therapists, and a specialist nurse dedicated to the compassionate comprehensive care of patients with amyotrophic lateral sclerosis (ALS).

Approach to Patient Care
The UAB Division of Neuromuscular Disease has a long-tradition of providing consultative evaluation and treatment of patients with suspected neuromuscular disorders. Following diagnosis and treatment initiation, our specialists partner with the patient’s primary care physician and neurologist for long-term follow-up. This approach allows us to focus on the accurate diagnosis of neuromuscular disorders in both the outpatient and inpatient setting.

Neuromuscular Disease Research
To ensure that we remain at the cutting-edge of current medical therapies and future discovery of new therapies for neuromuscular disorders, our UAB specialists are actively participating in clinical trials in CIDP, LEMS, MG and ALS. In addition to clinical trials, our scientists are involved in laboratory-based basic and translational biomedical research in neuromuscular disorders such as GBS, CIDP, HIV neuropathy and ALS. Our physician scientists and researchers are also available for collaborative patient-driven observational outcome studies, descriptive electrophysiological and histopathological studies as well as studies using patient-derived tissue or animal models of neuromuscular disease.
Clinical Services

A six-room Electromyography and Evoked Potentials Laboratory with modern standardized equipment, is staffed by four clinical neurophysiology technicians dedicated to the accurate diagnosis of disorders affecting the peripheral nervous system and their central connections. Evoked potential studies facilitate the clinical diagnosis of pure sensory radiculopathies, myelopathies affecting the dorsal columns, disorders of the brainstem and demyelinating optic neuropathies that may be below the resolution of standard neuroimaging techniques. This laboratory is located on the 2nd floor of Sparks Center.

Our monthly single fiber EMG Clinic provides an avenue to diagnose patients with myasthenia gravis in addition to routinely performed repetitive nerve stimulation (Jolly) studies. The electromyography and evoked potentials laboratory at UAB has the capability to evaluate 6,000 patients per year with detailed reports generated within 24 hours of service completion.

A dedicated biopsy suite is located within the laboratory for deep muscle, peripheral nerve, and skin punch biopsies to aid in the histopathological diagnosis of neuromuscular disorders. Muscles commonly biopsied under local anesthetic in sterile conditions include the anterior tibialis, vastus lateralis, biceps, and deltoid muscles. These biopsies aid diagnose inflammatory, metabolic, and mitochondrial myopathies and muscular dystrophies. The sural nerve is commonly biopsied to aid with the diagnosis of axonal and demyelinating neuropathies such as amyloidosis, chronic inflammatory demyelinating polyneuropathy (CIDP), demyelinating forms of Charcot-Marie-Tooth disease, and peripheral nerve vasculitis. Skin punch biopsies are also performed from a distal and proximal site for epidermal nerve fiber density analyses to diagnose small fiber neuropathies.

The Shin J. Oh Muscle and Nerve Histopathology Laboratory is equipped for the comprehensive assessment and pathologic diagnosis of peripheral nervous system disorders. The laboratory currently processes 400-500 muscle, nerve, and skin biopsy specimens per year from across the southeast, and contains start-of-the-art equipment to facilitate rapid and accurate pathologic diagnosis using light microscopy. Muscle samples are routinely fixed for electron microscopy analysis through a hospital-contracted service or frozen to submit for detailed biochemical, enzyme and genetic analysis as requested. A similarly detailed battery of histological stains is performed on fixed and frozen peripheral nerve. Semi-thin plastic embedded sections are routinely performed to more accurately diagnose peripheral nerve disorders such as Guillain-Barré syndrome (GBS), CIDP and vasculitic neuropathy, providing a tool for peripheral nerve morphometric analysis of large and small myelinated, and unmyelinated axons.

For Referring Physicians

To refer a patient please call 205.934.2120 and select the option for outpatient clinic or electrodiagnostic laboratory scheduling. Referral requests, recent medical records, electrodiagnostic, neuroimaging and pathology reports (if available), and results from recent laboratory evaluation including genetic testing should be faxed to 205.975.6758. Records may also be mailed to that UAB Neuromuscular Disorders Program, Sparks Center Ste. 200, 1720 7th Avenue South, Birmingham, AL 35294-0017.

Insurance precertification is needed to ensure patients can utilize the full array of diagnostic services available.

Physicians, pathology laboratories and hospitals may send specimens for processing and interpretation, as well as slides for neuromuscular pathology consultation with a 7-14 day turnaround. Pathology reports are sent to referring physicians, laboratories, and hospitals within 24 hours of case completion. Competitive prices exist for specialized histopathological services provided by the UAB Neuromuscular Disease Program.

To send a muscle, nerve or skin specimen for processing and interpretation or histopathology slides for diagnostic consultation, kindly mail to UAB Division of Neuromuscular Disease, Sparks Center Ste. 427, 1720 7th Avenue South, Birmingham, AL 35233-0017 using standard overnight courier services, Monday through Thursday (to arrive before 12 noon on Friday). Relevant clinical records may be sent with specimens or faxed 24-48 hours after sample submission to 205.975.4457. For questions related to diagnostic nerve and muscle histopathology, please call 205.934.2127.

The UAB Neuromuscular Disease Clinic is located on the 5th floor The Kirklin Clinic of UAB Hospital, 2000 19th Street South, Birmingham, AL, 35233.

For physician-to-physician consultation, or to be connected with our Birmingham clinics please call UAB MIST at 800.UAB.MIST (1.800.822.6478).

For more information, visit us online at uabmedicine.org.