

# EMG Clinics: 'Things worth doing are worth doing right'

**P**atients at EMG Clinics of Tennessee can rest assured knowing that they're receiving top-notch care from board-certified physicians and nationally certified technicians in an accredited facility.

Both Dr. Ron Bingham and Dr. Miles Johnson are dual board-certified physicians by the American Board of Physical Medicine and Rehabilitation and the American Board of Electrodiagnostic Medicine.

The two doctors and their four technicians also are certified through the American Association of Neuromuscular and Electrodiagnostic Medicine (AANEM).

This new credential for the technicians is tailored to capture the specialized knowledge, skills and abilities of professional electrodiagnostic technologists trained and educated in nerve conduction studies. The four Certified Nerve Conduction Technologists at EMG Clinics of Tennessee are Suzanne Bingham, Beth Giles, Melonie Brasher and Amanda Casey.

To be certified to do a nerve conduction study, the technicians took written and practical exams, were supervised by a physiatrist or a neurologist experienced in electrodiagnostic medicine for a year, and worked with at least 250 patients.

There are only 213 AANEM-certified technicians in the United States; four of them are at the EMG Clinics of Tennessee.

"We think it's important that the doc-



Dr. Ron Bingham does an electromyography test to check how well a muscle functions.

tors and technicians be board-certified to increase the accuracy of the diagnosis," Dr. Bingham said. "Things

## Interesting cases at EMG Clinics

**D**r. Ron Bingham, Dr. Miles Johnson and the certified technicians at EMG Clinics of Tennessee do much more than evaluate neuropathy, carpal tunnel syndrome and other common nerve and muscle problems.

"We find ourselves seeing more and more complex cases and serving a wider geographic area," said Dr. Bingham.

Here's a sampling of some of their interesting recent cases ...

**n** A man has a water skiing accident and dislocates his shoulder. His shoulder muscle becomes weak. "We test and determine that the nerve to the deltoid muscle has been injured, but not severed," said Dr. Bingham. "The outlook is good; no surgery is needed."

**n** A patient is unable to shrug or raise his right shoulder. He gets a lump in his throat when trying to swallow. During the physical exam, Dr. Bingham notices that the trapezius (shoulder) muscle is smaller on the right side of the patient's body. "Based on the pa-

tient's history and the exam, we find that the man has a pinched nerve in the base of his skull. We recommend special X-ray studies; a cancerous tumor is found and surgically removed." The man is doing well today.

**n** An elderly man comes in with weakness; he can't raise his leg to get into the car. "Our testing determines he has a muscle disease called inclusion body myositis, which is treatable with steroids. He had been suffering for two years, seeing numerous physicians before he was sent to us."

**n** While grocery shopping, a woman can't let go of a can of soup. Instead of picking up items for her grocery cart, she slides them off the shelves and into the cart. A man can't let go of a handshake, creating social problems. Both have the disease myotonia congenital, or the inability to relax certain muscles.

**n** A woman complains she can no longer push the hairspray button with her index finger. "We find she has a pinched nerve in her forearm," said Dr. Bingham. "Surgery released the nerve, and her problem was solved."

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Diagnosing nerve and muscle conditions is complex, Dr. Bingham says. "If done incorrectly, the patient may not get the treatment he or she needs or they may get surgery that they don't need. Hundreds of nerve and muscle diseases can cause weakness, pain or a sensory disturbance. It is very difficult to differentiate one from another."

### A need for experience

For example, a common pitfall for the untrained, less-experienced EMG provider is failure to record the temperature of a limb. A patient with a cold hand who just came to the clinic on a cold winter day might appear to have abnormal nerve conduction. "A nerve conduction study measures how fast electricity goes from point A to point B," Dr. Bingham explained.

"A cold temperature slows it down. The tester may inaccurately diagnosis the disease or a pinched nerve."

Testing nerves and muscles has been around since the 1950s, Dr. Bingham said. "Now many of us have chosen to focus on it; we're specialists."

Most people know that nerve and muscle testing is commonly done to detect carpal tunnel syndrome in the wrist or evaluate neuropathy, but the specialty encounters many different types of problems. "We see patients who can't bend their fingers, raise their eyebrows or who have abnormal movements of the arms and legs," said Dr. Bingham. (See story at left.)

For patients, the process is easy. They are referred to EMG Clinics of Tennessee by another provider who wants to know why a patient has pain, weakness or numbness in a particular part of the body, typically in the arm or leg.

### First a physical exam and patient history

Dr. Bingham starts the visit with a physical exam of the patient and the patient's medical history. A physical exam tests the strength, range of motion and reflexes. He looks for atrophy and signs that a muscle might be

Nerves are like wires in the arms and the legs. A nerve conduction study measures how fast electricity goes from point A to point B.

### Another Achievement for EMG Clinics

EMG Clinics of Tennessee was recently notified that it received the Electrodiagnostic (EDX) Laboratory Accreditation with Exemplary Status from AANEM. This accreditation is a voluntary, peer-review process that identifies and acknowledges EDX laboratories for achieving and maintaining the highest level of quality, performance and integrity based on professional standards developed by AANEM.

"This prestigious accreditation shows how serious we are about this important element of patient care," said Dr. Ron Bingham, who also is board certified in physical medicine and rehabilitation and electrodiagnostic medicine. "Our ten facilities are the first accredited laboratories in West Tennessee and the Memphis metropolitan area."

Accreditation provides laboratories specializing in EDX medicine with a structured mechanism to assess, evaluate and improve the quality of care provided to their patients. Exemplary Status is the highest level of accreditation - an EDX laboratory can achieve under the AANEM Accreditation Program.

weak. He also looks for abnormal twitching.

Dr. Bingham then tells one of his certified technicians what nerves to test based on his evaluation and the patient's symptoms.

"The nerves are like wires in the arms and the legs," Dr. Bingham said.

He then reviews the nerve conduction test and follows up with an electromyography test, which involves placing an electrode under the skin into the muscle. This test measures how well the muscle works.

A report is then sent to the referring physician. Patients go back to the referring provider for treatment.

The technicians and physicians also have iPads, which they can use to research difficult, unusual cases, said Dr. Bingham.

"We really foster a learning environment where we work as a team and do the best we can for the patient. The few cases that stump us have us spending a lot of time doing research; we'll even ask the patient to come back so we can do more assessments."

**D**r. Ron Bingham and Dr. Miles Johnson work at EMG Clinics of Tennessee. The administrative office is at 3035 N. Highland Avenue.

For more information, visit [emgclinics.com](http://emgclinics.com).