

We are located on the 7th floor of Jackson Hospital Professional Office Building. A cross-walk on the 4th floor of the parking deck leads to our office, Suite 700.

## Parking and Directions

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# EMG, EEG, and Evoked Potentials Laboratory



### PATIENT INFORMATION BOOKLET

**NEUROLOGY CONSULTANTS OF MONTGOMERY, P.C.**

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# EMG, EEG, and Evoked Potentials Laboratory

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Montgomery, Alabama 36106

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*Please Bring This Form With You When You Come For Your Tests.*

Appointment Date & Time: \_\_\_\_\_

Patient's Name: \_\_\_\_\_

Referring Doctor: \_\_\_\_\_

Report to be Sent to: \_\_\_\_\_

Clinical Diagnosis: \_\_\_\_\_

- Test(s) Requested:  Nerve Conduction Velocity (NCV)  
 Needle Electromyograph (EMG)  
 Electroencephalogram (EEG)  
 24 Hour Ambulatory EEG Monitoring  
 Evoked Potential Study: BAEP SEP VEP *(Please Circle)*  
 Repetitive Nerve Stimulation (Jolly)  
 Other: \_\_\_\_\_ *(Please Specify)*

Particular Questions to be Answered by These Tests: \_\_\_\_\_

\_\_\_\_\_

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## Explanation of Tests: NCV, EMG, EP, EEG

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**Y**our doctor has ordered one or more of the following tests for you: **NCV** (Nerve Conduction Velocity), **Needle EMG** (Electromyograph), **EP** (Evoked Potential), **EEG** (Electroencephalogram). These are diagnostic tests (not treatments) which can help determine whether any damage has occurred in nerve, muscle or brain tissue, or in the pathways leading from various organs to the brain.

**General Information:** Nerve cells carry tiny electrical charges which signal the muscles to contract. Special machines can measure this electricity, including how fast the signal is “conducted” along the nerve fibers and how well the muscles respond to the electrical stimulation. Evoked potential machines record the brain waves produced by electrical, visual, or auditory stimulation of the appropriate organs. If the response of the muscles is slow, or the brain waves are delayed, these tests will help your doctor to pin-point the problem and begin necessary treatment. EEG machines measure brainwave activity.

**What to Expect:** There is no special preparation for these tests, and the procedures are harmless. The physician or technician will ask you some questions about your medical history and present complaints. He/she will then ask you to lie down on an examination table or bed. You may be asked to remove some articles of clothing, depending on the area to be tested. In the testing room there will be one or more large machines with screens which the examiner will watch as your test proceeds; he will also be listening to the clicks or static-like sounds produced by the machine.

**Nerve Conduction Velocity (NCV):** This test measures how fast the nerve impulse travels along the nerve. Electrodes will be taped to your skin and you will feel tiny electrical shocks which may make your arm or leg “jump.” These will be slightly uncomfortable, but are not usually painful, and they are very brief. They have been compared to the “shock” you feel on a cold day when you walk across a carpet and touch a metal object.

With the **Needle EMG Test** we are studying how your muscles react to your commands. The doctor will cleanse your skin and insert a very fine, flexible needle directly into the affected muscles. The insertion of the needle is ordinarily not very painful, but may feel quite uncomfortable, depending upon the sensitivity of the area being tested. This part of the test is usually brief also.

**Evoked Potential Tests:** These are generally painless, although they take longer to perform than either the NCV or EMG. Electrodes will be attached to your scalp with electrode paste, and you will either lie on a bed or sit in a chair as you listen to clicks (Brainstem Auditory Evoked Potential, BAEP), watch a changing pattern on a TV screen (Visual Evoked Potential, VEP), or receive small electrical charges on your arms or legs (Somato-sensory Evoked Potential, SEP). These tests may require one hour or more to complete.

With the **EEG Test** we are recording brain waves. Electrodes are attached to the scalp with an adhesive agent, and you are asked to relax and even sleep. This test is painless.

**Importance of Relaxation:** The best advice your doctor can give you during these tests is to try to relax. Make yourself think of something else, breathe regularly and deeply, and let your muscles relax. If you are tense and your muscles are taut, the tests will take longer and be more difficult for both you and your examiner.

**Report of Findings:** The information obtained from the tests performed in the Electrodiagnostic Laboratory will be analyzed and sent to your doctor. He will explain to you the results as they apply in your particular case.

**Other Questions:** If you have any further questions regarding the tests or other matters, make a note of them and someone will attempt to answer them during your visit. If you cannot keep the appointment arranged for you, please call Dr. Miller’s office between 8:30 and 4:30, Monday through Friday, to reschedule your tests.