

## NEUROLOGIC TESTING

As part of your evaluation and treatment at Barry J. McCasland, M.D., P.C., it may be necessary for you to undergo one or more tests or procedures. Some of our most common tests and procedures are described below.

### Computerized Cognitive Testing

Some patients experience problems with memory, attention, or other aspects of cognitive function resulting from medical illness, concussion, and other conditions. When necessary, computerized testing gives an objective assessment of cognitive capabilities that can be followed with repeat studies over time to monitor for improvement. Testing is easy and takes 30-45 minutes.



### EMG and Nerve Conduction Test

This test is designed to evaluate the function of the nerves and muscles, and actually consists of two parts. The Nerve Conduction Test, performed first, involves a device that delivers a mild shock to a nerve and small electrodes that record the shock over other parts of the nerve or muscle. The speed with which the nerve carries electrical current, and the amount it is able to carry, provide useful information about whether the nerve is functioning up to par or not. The second part of the test, the EMG or electromyogram, evaluates the function of parts of the nerve that cannot be shocked (because they are not close to the skin) and evaluates the muscles as well. In this part of the test, a fine needle electrode is inserted into selected muscles, and the electrical currents generated by the muscle are recorded during rest and during a contraction. The results can be seen on a screen and heard on a speaker. While the test involves some unavoidable discomfort, nearly all patients are able to complete the test successfully. This test may be conducted as part of an evaluation for pinched nerves in the neck or back, numbness or weakness of an extremity, muscle pain, and a number of other reasons. The only preparation needed is to present for the test with clean dry skin, free from lotions or oils. These can, of course, be applied once the test is complete.



## Imaging Studies

Some type of imaging study is often required as part of a neurologic evaluation, though not always. Examples of imaging studies include MRI, CT scan, arteriogram, myelogram, and others. These tests may be performed on various regions of the body depending on the clinical situation. If one of these tests is needed, the staff at Barry J. McCasland, M.D., P.C. can arrange it with a top-notch, local provider at a convenient time.



## Lumbar Puncture

At times, it may be necessary for patients to undergo a lumbar puncture, known commonly as a spinal tap. During a lumbar puncture, the patient is draped as in a minor surgical procedure and the skin is cleansed and numbed with lidocaine. A needle is passed between the bones of the spine into the sac containing spinal fluid, the same fluid that circulates around the brain. Fluid is collected and sent to a laboratory for analysis. The procedure is only minimally uncomfortable and is performed in our office. The results can yield information about infections, inflammatory and cancerous diseases of the brain and spine.

