

Why get a Nerve Test

Background Information

Bladder Function is a delicate balance between nerves and muscles. The nerves tell the bladder and muscles involved with urination when to relax and when to flex. When these signals are balanced, the bladder will remain in a relaxation phase until it is full, then nerves send signals to the brain and we are able to make a decision about when to urinate. When the balance is upset, there is incorrect communication between the bladder, brain and muscles that can cause problems such as:

- 1) Frequent urination from an overactive nerve signal telling the brain that the bladder is full when it is not.
- 2) Leakage of urine often accompanied by a strong sense of urgency, or the bladder automatically emptying without a warning.
- 3) The inability to empty completely.
- 4) A similar problem can result in Bowel incontinence or leakage of stool.

Conservative Therapies such as kegel exercises and medications are designed to target the muscular behavior of the bladder. Unfortunately, these often do not improve symptoms very much and many people stop taking the medications or performing exercises. The reason these treatments are not likely to provide relief is quite simple. Experts estimate that approximately 85% of all voiding dysfunction is a result of the bladder nerves misfiring.

There is only one way to evaluate potential nerve dysfunction. The evaluation is known as a Percutaneous Nerve Evaluation or Nerve Test.

What is a Nerve Test?

The PNE or Percutaneous Nerve Evaluation is a way to diagnose if the problem is nerve related rather than a muscle problem. Very often the bladder dysfunction is a result of overactive or incorrect nerve signaling. This diagnostic test is much different than other tests we perform because it can actually improve your symptoms within a few hours or days.

The Nerve Test consists of placing a thin wire (as thin as fishing line) next to the nerves controlling the bladder. These nerves are located near the tail bone and are easily accessible. This test only requires local anesthetic. A small battery is connected to the other end which provides gentle stimulation to these nerves. **A voiding diary** is necessary **prior to and during** the nerve test to determine the success of the test. When the evaluation is successful, patients will notice improvements in their bladder symptoms which are usually dramatic. After 3 or more days of testing, the tiny wire is removed in the office. The evaluation is completely reversible and does not damage the nerves.

For those who experience an improvement in their bladder symptoms, your doctor will talk to you about maintaining this benefit long term. For those who have an inconclusive evaluation (because of movement of the lead), a more accurate test can be performed in a hospital using a lead placed under the skin that will not move during testing.