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## **DEEP BRAIN STIMULATION PRE-SURGICAL NEUROPSYCHOLOGICAL EVALUATION**

It is a national standard of care for all patients to undergo a “neuropsychological evaluation” prior to undergoing deep brain stimulation surgery. This is a lengthy investigation into the inner workings of your brain to check that your thinking is good and that you have no signs of dementia. People who have any dementia do not do well with DBS surgery. These tests yield vitally important data that we need to know before you undergo any type of brain surgery, and they will be repeated in a shortened form approximately six months after your surgery.

Over the years, patients have tended to ask similar questions about this procedure, so this handout will attempt to answer the most-asked questions.

### **WHY DO I NEED TO SEE ANYBODY OTHER THAN DR. WILDEN?**

Dr. Wilden is a neurosurgeon, and her primary tools are observations of your neurological symptoms, analysis of your body chemistry, and perspective on various kinds of “pictures” of your brain...CT scans, MRIs, and so on. She can tell by observing you and your brain that “something is wrong.” And she can almost always give a name to what is wrong...Parkinson’s disease, Essential Tremor, and so on.

Dr. Pinkston is a neuropsychologist, and he uses an entirely different set of tools and reveals an entirely different set of data. You can think of him as the guy who checks the software on your computer to analyze *with more detail* what is wrong.

### **WHY DO WE NEED TO KNOW ABOUT MY BRAIN’S SOFTWARE BEFORE WE DO SURGERY?**

There are two primary reasons for developing a baseline assessment of your brain function prior to performing surgery:

- 1.) **We need to capture comparative data.** If we do not know what your brain is capable of doing PRIOR to surgery, then we will be unable to determine if we helped you AFTER surgery. Dr. Pinkston tests a broad range of functions in your brain...mathematical functions, word functions, motor functions, speed and dexterity functions and many others. We use that data as your baseline. We cannot compare your brain function to someone else’s function. We can only compare it to YOUR function.
- 2.) **We need to insure there are no other cognitive problems in addition to Parkinson’s disease.** Sometimes a patient’s Parkinson’s symptoms are so pronounced that they “mask” other problems going on in the brain. A patient’s severe tremors or freezing may be so intense that the patient is actually unaware that other troubles are brewing at the same time, such as dementias. This is GOOD INFORMATION TO KNOW because it may make a difference in the types of medications your doctor prescribes for you.

## **WHY ARE YOU SENDING ME TO A PSYCHOLOGIST? ARE YOU SUGGESTING YOU THINK MY PROBLEMS ARE NOT REAL?**

No one thinks you are making this up. Dr. Pinkston is a *neuropsychologist*, not a “regular” psychologist. He specializes in brain functionality testing- how your brain works.

## **HOW LONG WILL IT TAKE FOR DR. PINKSTON TO ESTABLISH A BASELINE ON MY BRAIN’S FUNCTION?**

On average, Dr. Pinkston spends one hour performing what is called an “Initial Interview” and, on average, another four hours performing detailed testing. This is just an average and some patients may require more or less time.

### ***Initial Interview***

During the Initial Interview, Dr. Pinkston will talk with you and get to know you. He will ask a bit about your past history, your mood, your symptoms, your likes and dislikes, and so on. During the Initial Interview, the spouse and other family members may be present (if the patient chooses) to share their observations about the patient’s life, history, and ability to use his or her brain.

### ***Testing***

During the roughly four hours of testing, Dr. Pinkston will move through a battery of tests designed to develop a baseline in a number of different areas. We cover broad areas and report the data to Dr. Wilden.

After your surgery, in about 6 months, we do the same tests again. Naturally, what we hope to see is a stabilizing influence from your surgery. Often, patients even experience increased performance after the surgery because the Parkinson’s symptoms are absent or lowered and medications are changed or reduced. This allows the patient to think more clearly.

## **WHY DO SOME PEOPLE COMPLETE THEIR TESTING IN FOUR SESSIONS WHILE OTHERS COMPLETE IT IN TWO? I WANT TO DO IT ALL AT ONCE AND GET IT OVER WITH.**

Not every person can sit for two or more hours of testing at one time. Each person is highly individualistic, and during the Initial Interview, Dr. Pinkston and the patient will decide together what the best course of action will be.

Some people do not possess the cognitive stamina to exercise their brain intensely for more than one hour. If we continue to test someone who is not functioning at his highest level, we will not obtain data that is clinically valid.

Some people have physical reasons for not being able to sit for more than one hour. Perhaps they use medications that alter their brain function or they have low back pain that hurts when they sit for very long.

## **HOW SHOULD I PREPARE MYSELF FOR THIS TESTING?**

You cannot study for neuropsychological testing. Dr. Pinkston will be asking you many questions. The tests are designed so that some are very easy, some difficult, and no one expects you to get everything right. There is no particular passing score and no one fails. What we are trying to do is get a picture of your cognitive strengths and weaknesses. We are trying to determine where your abilities are so there have to be some questions you will get right as well as some you will not.

Many of our patients actually enjoy the mental exercise and challenge of testing.

Please do not hesitate to call if you have any questions or concerns.