**WHAT IS DBS?**
The goal of DBS is to regulate the electrical activity in certain brain areas in order to improve the symptoms of your movement disorder. Currently, DBS is approved by the US Food and Drug Administration (FDA) for the treatment of Essential Tremor (ET), Parkinson’s disease (PD), and dystonia. DBS is not a cure for your movement disorder, but should decrease many problems that have not adequately responded to medications.

**HOW IS DBS PERFORMED?**
Small electrodes (wires) are placed deep within certain structures in the brain which are then connected to a pacemaker-like battery pack, placed in your chest. The entire system is located under the skin.

**WHAT ARE THE RISKS OF DBS?**
The most serious risk of DBS is bleeding into the brain causing a stroke or death. Stroke occurs in under one percent of patients at Vanderbilt. Other uncommon complications include infection, malfunction of the stimulator and unintended movement of the implant. The DBS system may need replacement if these problems occur.

**WHAT ARE THE REQUIREMENTS FOR DBS?**
To be considered for DBS, you should meet these conditions:

- You have taken a reasonable course of medication as determined by your movement disorder neurologist.
- Despite medications, you are significantly disabled by your disorder but in good health for surgery.
- You do not have a medical condition that requires routine MRI scans of the body, as MRI interferes with DBS. CT scans are less affected by DBS.
- You are willing and able to participate in the programming of the device. You will need to travel to programming sessions and to provide feedback.
What is the surgical process?

PRE-SURGICAL WORKUP
If you meet the requirements, you will undergo neuropsychological testing to assess your mental functioning and mood. You will also see a physical therapist for a functional assessment of your movement. These results will be evaluated by the DBS team.

Surgery stages:
* The scheduling of stages of surgery may vary slightly for each patient.

**STAGE 1**
For surgical planning, bone markers (small screws) are placed beneath your scalp, followed by a special MRI and/or CT scan.
OUTPATIENT PROCEDURE

**STAGE 2**
The DBS (brain) wires are implanted at the optimal target, generally one week after Stage 1. You will be awake and off most medications during this time so that your symptoms will not be affected by sleep. You will stay overnight.

**STAGE 3**
DBS battery implantation and connection to the brain wires are generally done a week after Stage 2. Typically, the battery is placed below the collar bone, just like a heart pacemaker.
OUTPATIENT PROCEDURE

**PROGRAMMING**
The initial programming of your stimulators will occur about a month after Stage 2.
OUTPATIENT PROCEDURE

**AFTER PROGRAMMING**
You will still be seen periodically for adjustments for best symptom control.

In order to ensure that you are getting the best benefit from your DBS system, you will be asked to come back yearly for repeat testing.

BEFORE SURGERY
Neurologist — Movement disorders
Movement Assessment
Neuropsychological testing
Case conference
Insurance approval
Anesthesia evaluation

**SURGERY**
Stage 1 — MRI with bone markers - OUTPATIENT
Stage 2 A/B — awake implantation of leads, on both sides if applicable - INPATIENT
Stage 3 — implantation of battery pack - OUTPATIENT

**AFTER SURGERY**
Programming
CT scan of brain

FOLLOWUP
Neuropsychological testing
Movement Assessment
Reprogramming

The Vanderbilt Movement Disorders Center team is composed of neurologists, neurosurgeons, neuropsychologists, physical therapists, nurses and support staff.

For more information please contact:
Vanderbilt DBS coordinator
615.322.0141

To hear one patient’s story about DBS, please visit:
www.Lindas-story.com