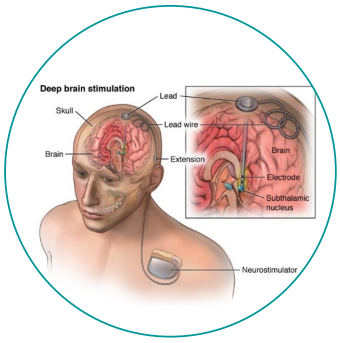
Deep brain stimulation



Deep Brain Stimulation (DBS) is a powerful tool in managing a broad number of neurologic illnesses.

This procedure involves placing a small device in the body which gives low voltage electrical impulses to dysfunctioning parts of the brain. These impulses can regulate abnormal functioning and improve a variety of diseases.

DBS is approved for treatment of a number of conditions, including:

- Parkinson's disease
- Essential tremor
- Dystonia
- Epilepsy
- Obsessive-compulsive disorder

LCMC Health Neuroscience Institute
Neurosurgery
1101 Medical Center Blvd.
Marrero, LA 70072
504.349.1890

LCMC Health

21-10826-012521-V1

What to expect during surgery

DBS surgery involves two parts: 1) The implanting of the electrodes within the brain, and 2) the placement of the pulse generator/battery beneath the skin in the chest.

For the brain surgery portion of the procedure, our team will fit you with a special stereotactic head frame to identify precisely where the location of electrode placement will be with a magnetic resonance imaging (MRI) study. This frame will stay in place throughout the surgery.

Surgery can be done either under general anesthesia, where you're unconscious, or with conscious sedation where you would remain awake with gentle sedative medications and local pain killer medications given before the procedure begins.

Your surgeon implants a thin wire lead with a number of electrodes at the tip into the specific area of your brain not functioning appropriately. The end of the electrode will remain under your scalp until the second half of the procedure a week or two later.

In the second portion of the surgery, the surgeon will implant the pulse generator. This is the part of the device with batteries that will generate the electric current. This procedure is done with the patient asleep. The electrode is attached to an extension cable that is passed under the skin behind the ear to a pocket made in the skin under the collar bone. It is attached to the pulse generator which is placed in the pocket. This is an outpatient procedure.

After surgery

A few weeks after surgery, the pulse generator in your chest is activated in your doctor's office.

The doctor can easily program your pulse generator from outside your body using a custom remote control. The amount of stimulation is customized to your condition. As every patient is unique, finding the optimal setting may take up to four to six months.

Your doctor will advise whether stimulation should be constant, or if the stimulation should be turned off at night and back on in the morning. In some cases, your doctor may program the pulse generator to let you make minor adjustments at home.

The battery life of your generator varies with usage and settings. When the battery needs to be replaced, your surgeon will replace the generator during an outpatient procedure.

Is DBS right for you?

Because every surgery involves some risk, it's important to carefully review the pros and cons of surgery with your doctor.

You will learn about the procedure and have all questions answered at this time to the best of your doctor's ability.

Meet our expert

Bryan Payne, MD
Neurosurgery

Areas of expertise:
- Neuromuscular Disorders
- Deep Brain Stimulation

Doctor of Medicine
University of Louisville, School of Medicine
Louisville, KY

Internship
General Surgery
LSU Health Sciences Center School of Medicine
New Orleans, LA

Residency
Chief Neurosurgery Resident
LSU Health Sciences Center School of Medicine
New Orleans, LA

Fellowships
Neurosurgery Lars Leksell Radiosurgery Fellow
University of Virginia
Charlottesville, VA

Functional and Stereotactic Neurosurgery Fellow
Division of Neurosurgery-Emory University
Atlanta, GA