

Should You Consider Deep Brain Stimulation?

Deep brain stimulation (DBS) is a neurosurgical treatment for the symptoms of advanced Parkinson's disease (PD). The procedure has been performed in thousands of patients. Is it for you?

If you or a family member with PD is considering DBS, there are several important steps to take. The first is to learn as much as possible about the procedure. Read widely, gather opinions and talk to your doctor. Take advantage of the medical literature to educate yourself, and request the new PDF educational booklet entitled *Deep Brain Stimulation for Parkinson's Disease*. In addition, you may wish to speak to someone who has already undergone DBS.

After learning more about DBS, the next step is to make an appointment at a center that specializes in the surgical treatment of Parkinson's disease. It is important that anyone considering this surgery be evaluated by a neurologist who is familiar with the procedures, with their expected benefits and with the potential risks.

If your neurologist feels you are a good candidate for the surgery, and you decide to go ahead, your next step is to meet the neurosurgeon for further consultation and preparation for surgery. The typical person who undergoes DBS has had PD for eight to 16 years. The best candidates for the surgery tend to fall into one of two categories. One is patients with severe, disabling tremors that do not respond to medication. The other is people who experience serious motor fluctuations (wearing-off spells) and dyskinesias and who have complicated medication schedules.

Not everyone is a good candidate for surgery. It is important to recognize that some symptoms of PD respond well to DBS while others do not. The decision to have surgery depends on a critical appraisal of each person's specific symptoms. Symptoms that respond well to DBS include tremor, rigidity, bradykinesia, dystonia and dyskinesias. Symptoms that do not respond well include balance impairment, gait freezing and falling, stooped posture and rapid stuttering speech.

The outcome of surgery is influenced by several factors. One of the best predictors of a good outcome is a person's response to levodopa — that is, people whose symptoms still respond well to individual doses of medication, and who are mobile during their "on" periods, can expect to benefit from DBS.

You may have heard that DBS should not be considered until PD medications have become totally ineffective. This is not true. When medications do not work at all, DBS will not work. The surgery is most promising for those patients who experience complications with medications — for example, dyskinesias — but who continue to respond well to individual doses of levodopa.

The best candidates for DBS are people who have typical PD with tremor; who respond to levodopa; who are in good health; who are of sound mind; and who have a supportive network of family and friends. Advanced age does not exclude an otherwise healthy individual from considering DBS.

The poorest candidates for surgery are people who do not have typical PD, and do not respond well to levodopa. Patients with dementia, apathy, depression, poor medical health and little family support should not undergo DBS.

Each person is unique, and for each, the goals of surgery will be different. For some, the most pressing need may be to control a disabling tremor. For others, it may be the need to reduce dyskinesias. It is very important that every person contemplating surgery have a clear idea about what can and what cannot be accomplished through this powerful intervention.

It is the role of the neurologist, working closely with a neurosurgeon at a specialized and experienced medical center, to make a careful evaluation of each individual who is considering DBS. Based on a careful history and neurological examination, the team can determine who should (and who should not) undergo DBS surgery, and to predict with accuracy how much improvement will occur.

It is important to remember that DBS is an elective procedure. Neurologists and neurosurgeons will make their recommendations but patients and families have the responsibility for the final decision. DBS is not a cure for PD, and it does not slow its progression. But for many, it can dramatically reduce some symptoms of PD and greatly improve a person's quality of life.

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Six Steps to Consider

- Talk to your treating neurologist
- Get information on DBS
- Talk to someone who has undergone DBS
- Visit a center that specializes in PD surgery
- Make an appointment with a neurologist at the center
- Meet the neurosurgeon