

## **What lies beneath – Understanding DBS Surgery**

*Deep Brain Stimulation or DBS surgery is a medical procedure that may be beneficial in reducing some of the symptoms associated with Parkinson's in some people\*.*

### **What are the benefits of DBS surgery?**

There is no known cure as yet for Parkinson's. DBS surgery will not halt the progression of the condition or provide a cure, however it may help reduce the symptoms associated with the condition, improving the individual's mobility and symptom control. It can often also lead to a reduction in the amount of medication needed to treat Parkinson's symptoms.

If the therapy is discontinued (if the device is turned off or removed) symptoms will return.

### **What does the procedure involve?**

DBS involves the placement of a pacemaker-like medical device in the muscles of the chest. This is connected to leads implanted in targeted areas of the brain, namely those responsible for movement.

Both the stimulator device and leads sit under the skin and nothing is visible on the surface (although the outline of the device may be visible). The device then delivers electrical stimulation to those parts of the brain which control movement, overriding the signals that cause the disabling motor symptoms of Parkinson's. The outcome is that individuals may experience greater control over their physical movements.

### **Are there any side effects?**

Side effects of DBS surgery are rare but may include:

- Experiencing tingling sensations
- Worsening of symptoms
- Developing speech problems
- Experiencing dizziness or lightheadedness

Many side effects related to the effects of the stimulating device can be managed by adjusting the device's settings. Often several adjustments to the stimulation are required over the first six months as the specialist works to fine tune the settings in order to ensure optimal results from the procedure. These adjustments to both the settings and stimulation levels can be done non-invasively (in other words, additional surgery is not required to make adjustments).

The DBS procedure is completely reversible. And, as with a cardiac pacemaker, the device (battery and neurostimulator) will need to be replaced at some stage.

Complications from the surgery are also rare, however DBS carries the same sorts of risks as other surgical procedure.

Complications may include:

- Intracranial hemorrhaging
- Infection
- Pain at the surgery sites

# DEEP BRAIN STIMULATION (DBS) SURGERY

## **How effective is DBS for treating Parkinson's disease?**

According to Medtronic, manufacturers of the DBS device, clinical studies showed that 87 percent of patients demonstrated improved motor scores in the "off" medication state at the end of the 12-month evaluation.

**(Therapy Clinical Summary, 2003; [www.medtronic.com.au](http://www.medtronic.com.au)).**

\*It is important to note that not everyone diagnosed with Parkinson's is a suitable candidate for surgery and that there are stringent measures in place to screen possible candidates, with the aim being to ensure the procedure is as successful as possible.

**If you would like more information about DBS surgery, please contact Parkinson's Victoria or speak with your Neurologist. You can also watch our 'Deep Brain Stimulation (DBS) Seminar' from 2009 on our YouTube channel – [www.youtube.com/parkinsonsvic](http://www.youtube.com/parkinsonsvic)**

## **Support network for DBS patients**

### **Expressions of interest sought...**

Have you had Deep Brain Stimulation (DBS) surgery for Parkinson's symptoms? Would you like to meet and talk with others who have had this operation? Parkinson's Victoria is seeking expressions of interest from people who would like to connect with others to share their post-operative experience of DBS. We have already been contacted by several individuals and believe there is a genuine need and interest in establishing such a network. The purpose of the get-togethers is to meet others who are keen to share their personal experience of DBS surgery, including the impact surgery has had on their lives, and to share information.

*Health Team note: Please note, this group does not aim, nor is it equipped to be, a therapy group. If you are interested in participating in this new Victorian-based initiative, please contact Catherine at Parkinson's Victoria: (03) 9551 1122 or email [catherine@parkinsons-vic.org.au](mailto:catherine@parkinsons-vic.org.au)*

**This article was originally printed on pg. 18 of the Summer 2009 edition of 'Signpost', our member newsletter.**

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**[www.parkinsonsvic.org.au/about-ps/publications.htm#signposts](http://www.parkinsonsvic.org.au/about-ps/publications.htm#signposts)**

**For more information about Parkinson's and Deep Brain Stimulation (DBS), or if you have any question in relation to Parkinson's, please contact Parkinson's Victoria.**