Boston Scientific
Advancing science for life™

Navigating Parkinson's:

Your Complete Guide to Deep Brain Stimulation (DBS)



Hope Beyond Medication

If you're living with Parkinson's, you know all too well how the disease disrupts your life. Losing the ability to perform simple, everyday tasks limits your independence and strains your relationships. The increasing side effects of medications can feel overwhelming.

But medication isn't your only treatment option. At Boston Scientific, we offer a unique, personalized therapy that can put you on the path to a better tomorrow—Deep Brain Stimulation, or simply DBS.





"Every time I would go see my doctor he would give me new medicines... and I was waiting and waiting for that medicine to make me feel better.
I got tired of waiting. I'm watching the years go by.
*I needed to do something because I wasn't living life the way I wanted to." **
– Suzanne F., Living with DBS since 2019

*The patient quotes in this material describe real personal experiences. Individual results may vary. Consult with your physician to determine if you are a candidate for this procedure and what you may gain from the therapy.

DBS: A Proven Treatment When Medication Isn't Enough

Although it's not a cure, Deep Brain Stimulation (DBS) is an FDA-approved, safe, and proven medical treatment that has helped hundreds of thousands of Parkinson's patients manage their symptoms when medication alone isn't enough.

DBS uses a small, surgically implanted device called a "stimulator" that sends signals to a targeted area of your brain. This stimulation improves motor function by reducing symptoms like tremors, slowness, and rigidity.

For many Boston Scientific patients, this procedure has transformed their lives.

The FDA first approved Deep Brain Stimulation in 1997 to treat essential tremor; in 2002 it was approved for Parkinson's disease.[1]

How DBS Works

When Parkinson's patients experience motor symptoms, it's because low dopamine levels in their brain are causing abnormal signaling.

Deep Brain Stimulation can help regulate those signals by sending targeted electrical stimulation to specific regions of the brain. As a result, Parkinson's symptoms are often reduced.

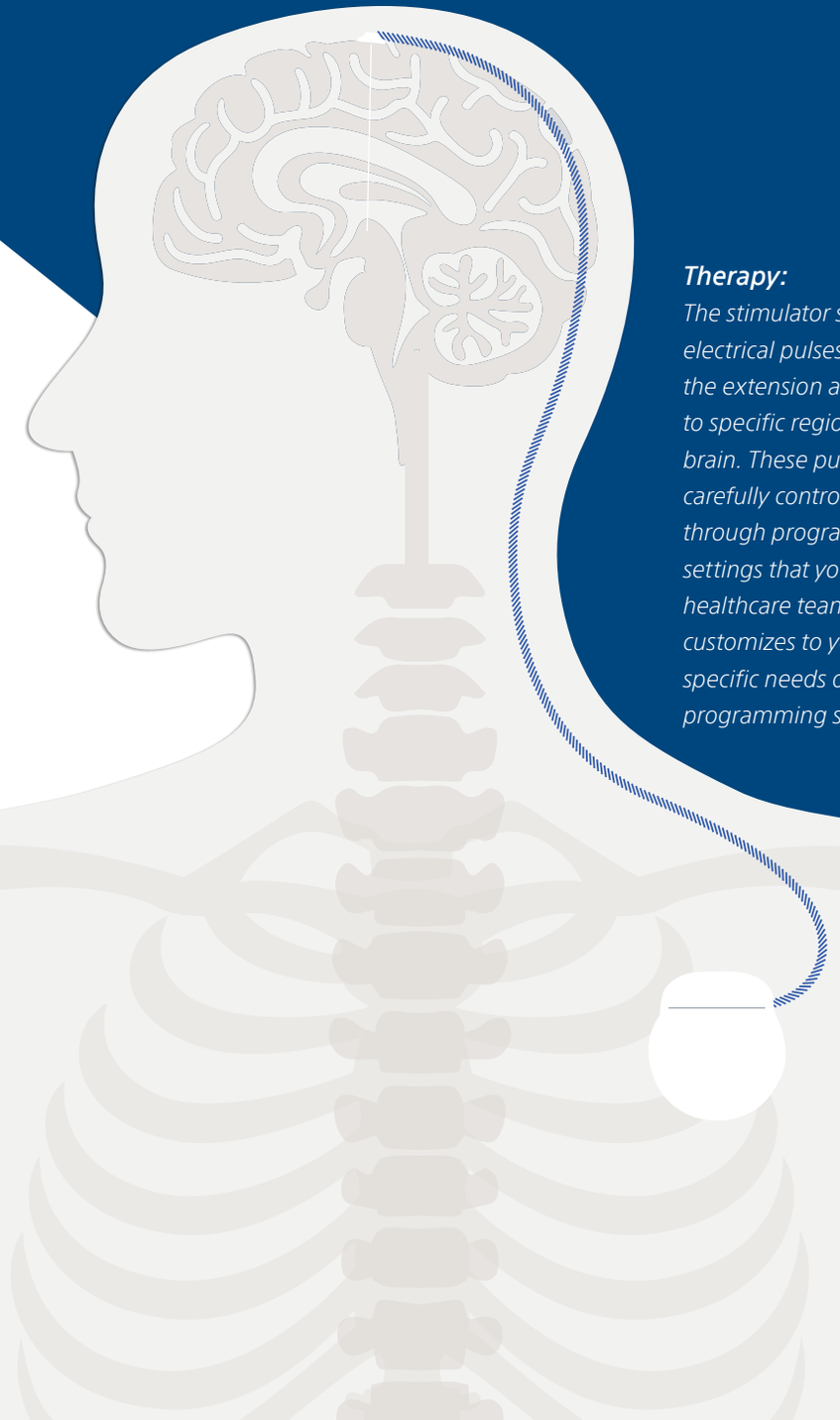
A DBS system consists of two main components



Leads:
Your doctor will place one or two insulated wires called leads in the brain, which connect to a thin wire called an extension.



Battery:
A battery, also called a stimulator or an Implantable Pulse Generator (IPG), powers the system. The battery is typically placed under the skin near the collarbone and connects to the leads via extension wires.



Therapy:
The stimulator sends mild electrical pulses through the extension and leads to specific regions of the brain. These pulses are carefully controlled through programmed settings that your healthcare team customizes to your specific needs during programming sessions.

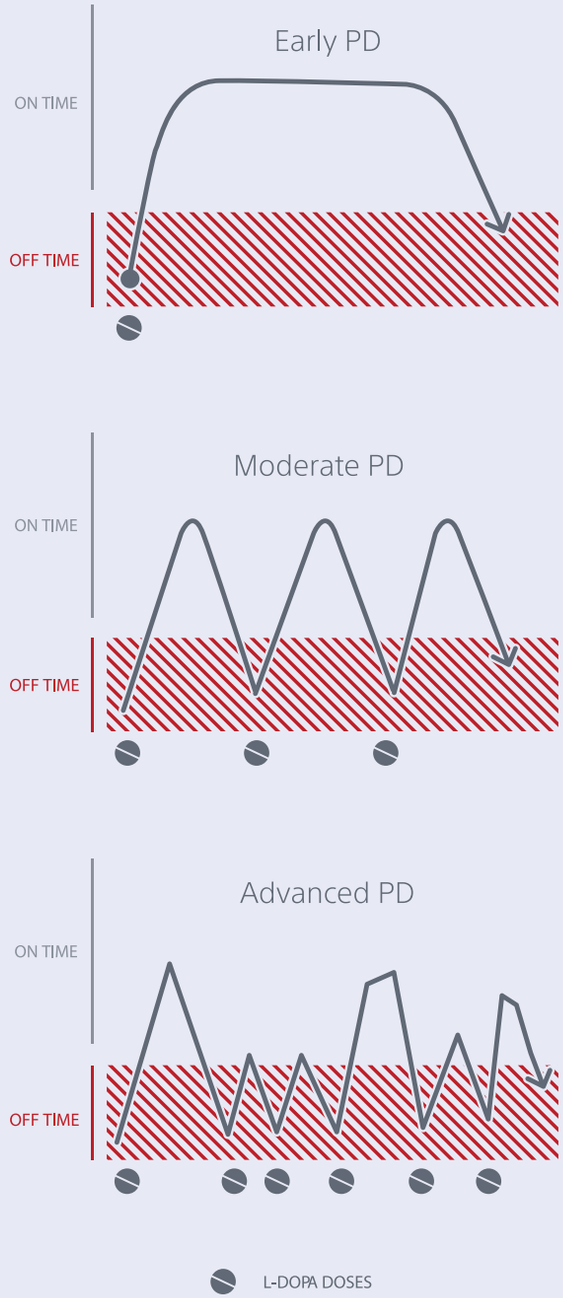
When to Consider DBS

DBS isn't typically recommended when patients are first diagnosed with Parkinson's disease. At that stage, medications like levodopa (L-DOPA) effectively maintain your "ON time" and provide better movement control.

However, over time, levodopa's effects begin wearing off more quickly. To minimize your "OFF time," you may need to increase your dosage or take additional medication. This can lead to unwanted side effects, including intense, uncontrolled movements known as dyskinesia.[2]

The Medication Journey: From L-DOPA to DBS

As Parkinson's advances, medication may lose its ability to control your motor symptoms.[3]



Timing Your DBS

There is an ideal “window” for getting DBS therapy – and a point at which it’s too late to have the procedure. In general, the best time to begin DBS treatment is when you’re still responding to levodopa, but are no longer able to control motor symptoms with medication alone. This point varies from patient to patient, but is typically about four years after diagnosis.[4]

Although there is no age cutoff for DBS, overall health status and evidence of dementia will affect DBS eligibility, so it’s important to start talking about DBS with your movement disorder neurologist early in your disease progression. And if you’re struggling to keep up with your medication regimen, the time to talk to your doctor is now.

> *In a survey of patients, the majority said they wish they had received DBS sooner than they did.**



Talk to a Movement Disorder Neurologist about DBS

First symptoms appear → *Patient is diagnosed with PD* → *Medications manage symptoms well* → *Medications are adjusted or increased* → *ON-time/OFF-time fluctuations become more frequent* → ***DBS window closes***

*Survey of 100 Boston Scientific DBS implant recipients.

DBS Effectiveness and Clinical Outcomes

Not all Parkinson's patients are affected by the disease in the same way. The severity, type, and frequency of symptoms vary from person to person, as does their response to DBS treatment.

However, DBS often enables patients to reduce their medication intake and live free from disruptive side effects such as uncontrolled movements, incontinence, and mood changes.

96%

96% Patient Satisfaction

If given the chance, 96% of DBS patients would choose to do it again.[5]



More "ON Time"

DBS provides roughly 8 to 10 hours of "ON time" per day giving you control and independence to live your life without rigidity or freezing.[6]



Sustained Results

Marked improvements in motor function are sustained for at least 5 years.[7]



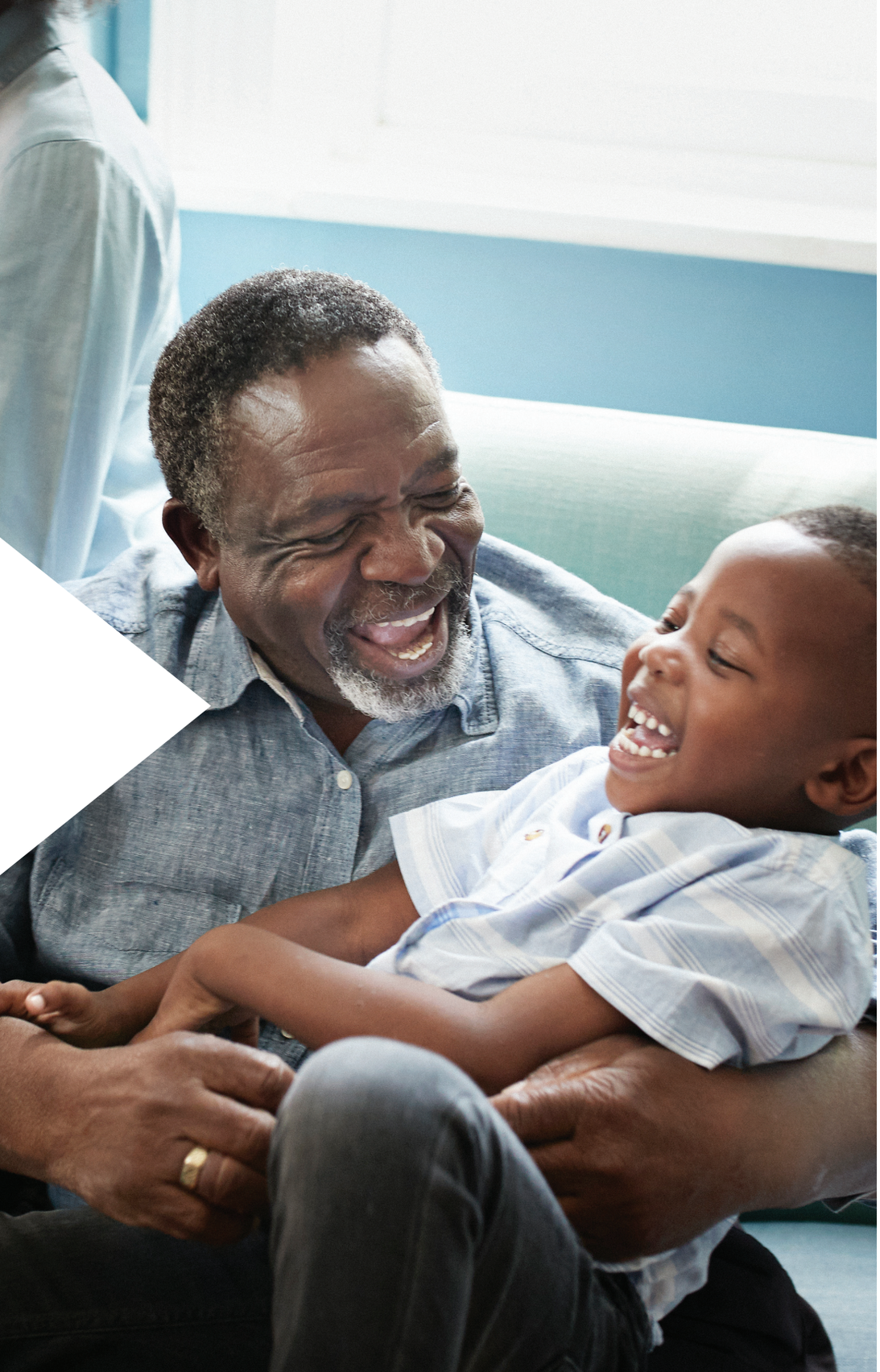
Less Tremor

People with tremor experience an average of 70% reduction in tremor, depending on its type and location.[8,9,10]



Fewer Pills

1 year into treatment, Boston Scientific DBS patients reported a 30% decrease in medication usage.[8]



The Device You Choose Matters

What to know when considering DBS

Precise Therapy, Fewer Side Effects *Where stimulation is needed, and where it isn't, matters. Boston Scientific offers Multiple Independent Current Control (MICC) that allows individual adjustment of each contact, providing more precise stimulation and fewer side effects.*

Personalized Programming *Programming should be tailored to you, based on your needs. With Boston Scientific, pre- and post-surgery imaging helps direct stimulation exactly where needed while avoiding sensitive areas. With Illumina 3D™ technology, proprietary expert algorithms adapt therapy specific to your needs. This reduces programming time, giving time back to you and your physician.*

MRI Compatibility *You may need an MRI in the future. That is why Boston Scientific's DBS System offers full-body MRI capabilities with ImageReady™ technology. This ensures you'll be able to get a scan if you need one.**

Battery Options *Only Boston Scientific lets you choose from five device options (2 rechargeable and 3 non-rechargeable) based on your lifestyle and preferences.*

Future Adaptability *Boston Scientific's DBS System offers more therapy options than any other system**, ensuring your device can support your care needs both now and in the future.*

*The Vercise Genus™ DBS System, Vercise Genus Mixed System with Vercise™ M8 Adapter, Vercise Genus Mixed System with Vercise™ Adapter S8, Vercise Gevia™ DBS System, and Vercise™ DBS Lead-only System (before Stimulator is implanted) provide safe access to full-body MRI scans when used with specific components and the patient is exposed to the MRI environment under specific conditions defined in the supplemental manual ImageReady™ MRI Guidelines for Boston Scientific DBS Systems.

**See reference page.

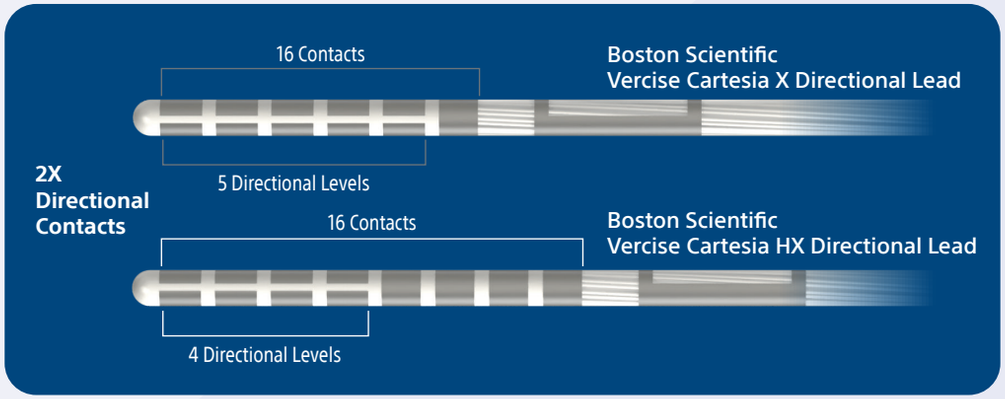
Hardware Excellence: The Boston Scientific Advantage

Our DBS System features state-of-the-art hardware designed for optimal outcomes:

Vercise™ Cartesia™ X and Vercise™ Cartesia™ HX Directional Leads

The first-and-only 16-contact directional leads. These leads offer the best in span, spacing, and directionality.†

Why this matters: The longer directional span and tight spacing allow for more precise targeting of your neural structures, maximizing effectiveness while avoiding unwanted side effects.





† see reference page

Offering the broadest portfolio of batteries on the market**

Whether you choose non-rechargeable or rechargeable, both types of batteries are designed to be thin and lightweight, with smooth, gently rounded edges. This not only improves comfort but also helps to conceal signs of the implant.

Non-rechargeable

A maintenance-free option that requires surgical replacement when depleted. Perfect for patients who prefer not to worry about regular charging.

Lasts 3 years*



Rechargeable

A smaller, longer-lasting device designed for at-home recharging on a weekly or monthly schedule. Ideal for patients who are comfortable maintaining a charging routine.

Warrantied up to 15 years

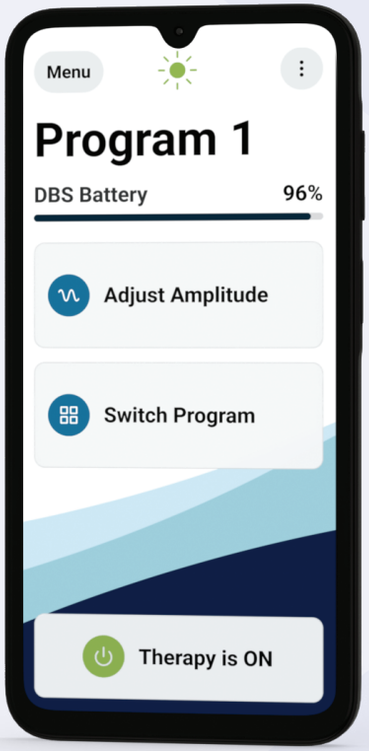


*Minimum 3 years battery longevity under nominal settings.
** see reference page

DBS Control at Your Fingertips

Our DBS System Controller is now an app on your smartphone*

When you are implanted with a Boston Scientific DBS System, you'll receive a smartphone that comes with our app already installed. Designed with DBS patients to feature large buttons and intuitive navigation, our DBS Controller makes sure your DBS System stays safe and connected.



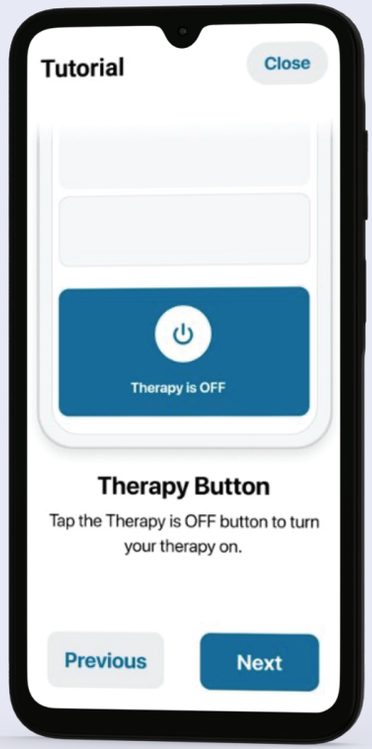
Clear Display

Easy-to-read screen shows your settings at a glance.



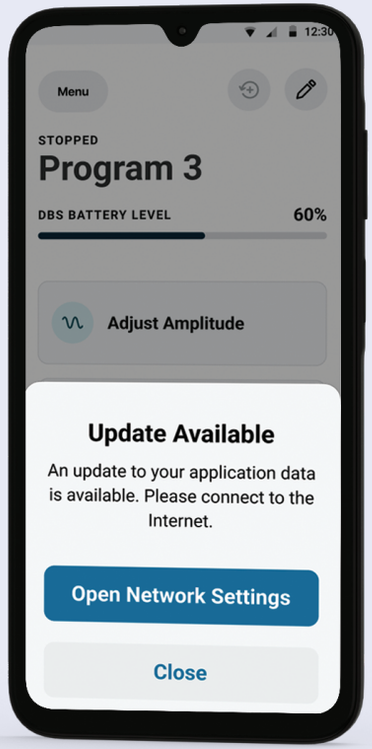
Larger Buttons

Larger buttons allow for more comfortable interactions. Enjoy simple and precise adjustments.



Step-by-Step Guidance

Built-in tutorials help you navigate features with confidence.



Future-Ready Technology

As your needs evolve, so does your controller. Regular updates ensure you always have access to the latest features and updates.

*The Vercise™ DBS Controller is compatible with the Vercise Genus™ Deep Brain Stimulation only.
Please visit: https://www.bostonscientific.com/VerciseDBSController-compatibility for a list of compatible mobile devices.



Smart Software, Better Results: Illumina 3D™

The technology behind your DBS therapy

Boston Scientific's Illumina 3D technology helps your care team deliver more personalized, precise therapy—right where it's needed in your brain.

Here's how Illumina 3D makes a difference:

✔ Tailored to You

No two brains are the same. Illumina 3D uses your unique brain imaging to help fine-tune your therapy—based on your anatomy and symptoms.

✔ More Control, Less Guesswork

Your doctor can steer the stimulation with pinpoint accuracy, helping target symptoms while avoiding areas that might cause side effects.

✔ Faster Relief

Smart algorithms help your doctor find the best settings more quickly, so you may start feeling better sooner.[10, 11]

✔ Evolves With You

If your symptoms change over time, your therapy can adapt—without additional surgeries or device changes.

✔ Better Quality of Life

Precise therapy often means fewer side effects, fewer office visits, and better day-to-day symptom control.[12]

Illumina 3D is exclusive to Boston Scientific.

Frequently Asked Questions

1: Is DBS safe?
DBS has been used for over two decades in more than 100,000 patients, demonstrating both short and long-term safety.[6,7,8,9] When performed by an experienced neurosurgeon within an interdisciplinary team, DBS is considered a well-established and reliable treatment option.

Like any surgical procedure, DBS does carry some risks and potential side effects, which can vary from patient to patient. However, most side effects are temporary and often improve as the therapy is adjusted and optimized. It's important to discuss individual risks with your healthcare providers.

Overall, DBS has a risk profile that is similar to, or in some cases better than, many routine elective surgeries. In fact, procedures often perceived as less invasive, such as knee replacement, hysterectomy, or bariatric surgery, can have higher short-term complication rates than DBS.[13]

2: Could I be a candidate for DBS?
The ideal candidate is a Parkinson's patient who continues to respond positively to levodopa treatment but is unable to control motor symptoms with medication alone. Ask your neurologist if DBS is a suitable therapy for you and your symptoms.[4]

3: Will my insurance cover DBS therapy?
For Medicare patients, DBS therapy will be covered. Most other health plans will also cover DBS, though your doctor or hospital may need to provide an authorization prior to the procedure.

4: Can I stop my medication after DBS surgery?
Sometimes successful DBS surgery can lead to a decrease in your medication, though the treatment is not intended to replace your medication.[14]

5: How long will my DBS System last?
A DBS battery's life is dependent on its stimulation settings and conditions. The non-rechargeable Vercise Genus™ P16 System will last minimum of 3 years with nominal settings. A rechargeable Vercise Genus™ R16 System is warrantied up to 15 years.

6: Is it possible to have an MRI with a DBS implant?
The Vercise Genus DBS System does provide full-body MRI access* under certain conditions. If your system does not meet those conditions, other imaging options (including X-rays, CT scans, PET scans, and ultrasounds) may be available. Always consult your doctor to learn which imaging modality will be your best option.

7: Can I have a DBS implant if I already have a pacemaker?
Typically, DBS batteries are placed in the upper chest, near the area a pacemaker would be. However, a DBS implant can be inserted on the other side of your chest.

8: Can I travel with my DBS implant?
Yes, you can travel with your DBS System. Metal detectors, X-ray machines, security scanners, and other security devices will not damage the implant, but may cause unintentional stimulation. The implant may also activate metal detector alarms, so carrying your patient ID card with you at all times is recommended. If traveling abroad, you may need an outlet adapter to charge your system.

9: What will I feel when my DBS device is switched on?
During initial programming, you may experience a tingling sensation. This helps pinpoint your ideal settings. Afterwards, most patients hardly notice the device—though some do experience a slight tingling in the arm or leg, or mild tension in facial muscles that often subsides.

10: Does the DBS device make a noise?
No, the DBS device is completely silent.

11: Will other people be able to notice my DBS device?
Since the DBS stimulator and wires are placed under the skin, they are hardly noticeable from the outside. For thin patients, the stimulator site will be slightly raised, and the wire may appear like a slightly larger vein, but this should not be noticeable through clothing. The incision usually leaves a small scar.

*MRI conditional when all conditions of use are met.



Next Steps in Your DBS Journey

We understand that considering DBS therapy is an important decision, and we're here to support you with multiple resources and ways to learn more:

Speak with a Patient Education Specialist: Our dedicated specialists can answer your questions and provide detailed information about DBS therapy. You can reach them at 833.327.1473.

Connect with Patient Ambassadors: Talk to individuals who have undergone DBS therapy and can share their personal experiences. Visit DBSandMe.com to make a request to speak to a Patient Ambassador.

Attend Educational Webinars: Register at DBSandMe.com to participate in informative sessions about DBS therapy.

Explore Patient Success Stories: Read or watch real patient experiences and outcomes with DBS therapy at DBSandMe.com.

CALL: 833.327.1473
VISIT: DBSandMe.com
EMAIL: BSCDBSPatientTeam@bsci.com

Notes

** Information for competitive devices excerpted from the literature published by Medtronic (M982261A015 Rev A, M939241A051 Rev A, M013074C001 Rev B, M982097A013 Rev A, M13075C001 Rev B, M019192C002 Rev A) and Abbott (ARTEN600150429 - B, ARTEN600102238 - A, ARTEN600266398 -A, ARTEN600308953 -A, ARTEN600308947 -A), and

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† Best is defined as the directional lead with the longest directional span and most directional levels Boston Scientific. (2024). Vercise™ Deep Brain Stimulation Systems Surgical Implant Manual. https://www.bostonscientific.com/content/dam/elabeling/nm/92328632-05B_DBS_Surgical_Implant_Manual_US_EN_s.pdf Medtronic. (2021). Medtronic Sensight™ Directional Lead Kit. https://www.medtronic.com/content/dam/emanuals/neuro/M982097A_a_013_view.pdf Abbott. (2021). Lead and Extensions Kits for Deep Brain Stimulation Systems. Clinician's Manual. https://manuals.eifu.abbott/en/detail-screen.html

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Indication for Use:
The Boston Scientific Vercise™ PC, Vercise Gevia™, Vercise Genus™ Deep Brain Stimulation (DBS) Systems are indicated for use in the following:

- Bilateral stimulation of the subthalamic nucleus (STN) as an adjunctive therapy in reducing some of the symptoms of moderate to advanced levodopa-responsive Parkinson's disease (PD) that are not adequately controlled with medication.
- Bilateral stimulation of the internal globus pallidus (GPi) as an adjunctive therapy in reducing some of the symptoms of advanced levodopa-responsive Parkinson's disease (PD) that are not adequately controlled with medication.
- Unilateral thalamic stimulation of the ventral intermediate nucleus (VIM) is indicated for the suppression of tremor in the upper extremity. The system is intended for use in patients who are diagnosed with essential tremor or parkinsonian tremor not adequately controlled by medications and where the tremor constitutes a significant functional disability.
- Bilateral stimulation of the ventral intermediate nucleus (VIM) of the thalamus for the suppression of disabling upper extremity tremor in adult essential tremor patients whose tremor is not adequately controlled by medications and where the tremor constitutes a significant functional disability.

Intended Use:
The Boston Scientific Deep Brain Stimulation (DBS) Systems are intended to treat movement disorders by stimulating a specific brain target.
The Vercise™ DBS Controller is intended to communicate with and control the compatible Boston Scientific Stimulator.
The Charger is a medical device that is intended to charge the battery of the compatible Boston Scientific rechargeable Stimulator.

Contraindications: The Boston Scientific Deep Brain Stimulation (DBS) Systems are not recommended for patients who will be exposed to the following procedures: Diathermy as either a treatment for a medical condition or as part of a surgical procedure, Electroconvulsive Therapy (ECT) and Transcranial Magnetic Stimulation (TMS). The safety of these therapies in patients implanted with the Boston Scientific DBS System has not been established. Patients implanted with Boston Scientific DBS Systems without ImageReady™ MRI Technology should not be exposed to Magnetic Resonance Imaging (MRI). Patients implanted with the Vercise Gevia or Vercise Genus or Vercise Genus Mixed System with M8 Adapter or Vercise DBS Lead-Only System (before Stimulator is implanted) with ImageReady MRI Technology are Full Body MR Conditional only when exposed to the MRI environment under the specific conditions defined in ImageReady MRI Guidelines for Boston Scientific DBS Systems. The external/non-implantable components of the Vercise Genus DBS System (Charging System, Remote Control, mobile device with Vercise DBS Controller, and accessories) are MR Unsafe. Do not take them into any MRI environment.
Boston Scientific DBS Systems are not recommended for patients who are unable to operate the system or are poor surgical candidates or who experience unsuccessful test stimulation.

Warnings: With all medical procedures, there are risks associated with the procedure and the use of the device. Unauthorized modification to the medical devices is prohibited. You should not be exposed to high stimulation levels. High level of stimulation may damage brain tissue. Patients implanted with a Boston Scientific DBS System may be at risk for intracranial hemorrhages (bleeding in the brain) during DBS lead placement. Strong electromagnetic fields, such as power generators, security screeners or theft detection systems, can potentially turn the stimulator off, or cause unpredictable changes in stimulation. The system should not be charged while sleeping. If you notice new onset or worsening depression, changes in mood or behavior or impulse control, or have thoughts of suicide contact your physician or emergency services immediately. You should use caution when doing activities that require coordination, even if you were able to do them before receiving therapy (for example, swimming). Patients should exercise reasonable caution when bathing. Chemical burns may result if the Stimulator housing is ruptured or pierced. The Boston Scientific DBS Systems may interfere with the operation of implanted stimulation devices, such as cardiac pacemakers, implanted cardioverter defibrillators, or medication delivery pumps. Patients should operate motorized vehicles or potentially dangerous machinery with caution. It is unknown whether the DBS device may cause complications with pregnancy. Do not use the Vercise™ DBS Controller while the mobile device is charging. The effect of using the Vercise DBS Controller while charging the mobile device has not been evaluated.
Be sure to talk with your doctor so that you thoroughly understand all of the risks, precautions, and benefits associated with the use of the device and what indicates, and contraindicates, certain patients– as well as the risks and precautions for the procedure. For complete indications for use, contraindications, warnings, precautions, and side effects, see DBSandME.com or call 833-DBS-INFO or 833-327-4636.
CAUTION: U.S. Federal law restricts this device to sale by or on the order of a physician.

Go to DBSandMe.com or scan the QR code to learn more about Deep Brain Stimulation.

Point Phone's Camera Here

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