



Medtronic deep brain stimulation (DBS) for adult dystonia

Move with confidence

Rediscover life with restored independence and improved quality of life



The only
FDA-approved DBS
system in the U.S. shown
to be safe and effective
for treating dystonia
symptoms

Improving movement, restoring independence

For someone living with dystonia, everyday activities like eating, sleeping, talking, and walking can feel like daily battles.¹⁻³

If oral medications and/or injections are not providing adequate relief, Medtronic deep brain stimulation (DBS) offers a **safe and effective** treatment that can significantly improve dystonia symptoms.

As many as

250,000

people in the United States, including adults and children, have dystonia.⁴

“With DBS, my body felt restored. My pain is now manageable. I can walk again, and I’ve returned to work after 10 years.”

– Mary,
receiving Medtronic DBS
for dystonia

Mary’s story is based on her individual experience. Not all patients will experience similar results.



Be empowered to live on your own terms

Dystonia causes abnormal movements or body positions that may repeat, feel jerky or shaky, and often get worse when a person tries to move.⁵

DBS shows improvement in movement, disability, and severity scores:



Improved movement

In adults with generalized and segmental dystonia†
Greater than a 60% average improvement in BFMDRS motor score (generalized n=130, segmental n=94).¹



Increased independence

In adults with generalized, cervical, and segmental dystonia†
DBS therapy may maintain improvement of movements as well as the ability to perform daily activities for several years¹



Enhanced quality of life

In adults with generalized and segmental dystonia†
Patients experienced significant improvements in quality of life at 6 months (n=34), and benefits were sustained for up to 5 years (n=29).²



Reduced depression and anxiety

In adults with generalized and segmental dystonia†
DBS therapy significantly reduced depression and anxiety (n=40).^{2,3}

What is BFMDRS & TWSTRS?

The BFMDRS (Burke-Fahn-Marsden Dystonia Rating Scale) and TWSTRS (Toronto Western Spasmodic Torticollis Rating Scale) are clinical tools doctors use to measure how dystonia affects movement and function.¹

BFMDRS is used for generalized and segmental dystonia to assess overall motor severity and functional impact.

TWSTRS is specific to cervical dystonia and also captures neck-related pain.

† Of the head and neck



Understanding risks

DBS therapy may help you manage some of the symptoms of dystonia, including involuntary movements, but it is not a cure. Potential risks related to the device, therapy, or surgery can include implant site pain, tingling sensations, ineffective stimulation, and implant site infection.



Rediscover life with improved movement and less pain

For people with dystonia, DBS may help regain movement, reduce pain, and reclaim everyday moments.

Dystonia symptom reduction

>60%

Average improvement in BFMDRS motor score in **adult patients with generalized** (n=130) **or segmental** (n=94) **dystonia**¹

58%

Adult patients with cervical dystonia demonstrated an average TWSTRS severity score improvement of 58% (n=245)¹

Reduced pain

51%

In adult patients with cervical dystonia
51% reduction in pain at 6 months (n=58)¹⁰

up to 10 years

Pain reduction sustained up to 10 years experienced by **adult patients diagnosed with generalized and segmental dystonia**[†] (n=28)^{1-3,6}

Possible side effects with DBS therapy for dystonia might include:

- Status dystonicus
- Risk of depression, suicidal ideations, and suicide
- Rebound effect: an abrupt cessation of stimulation may cause a return of disease symptoms and in some cases with a greater intensity than prior to implant

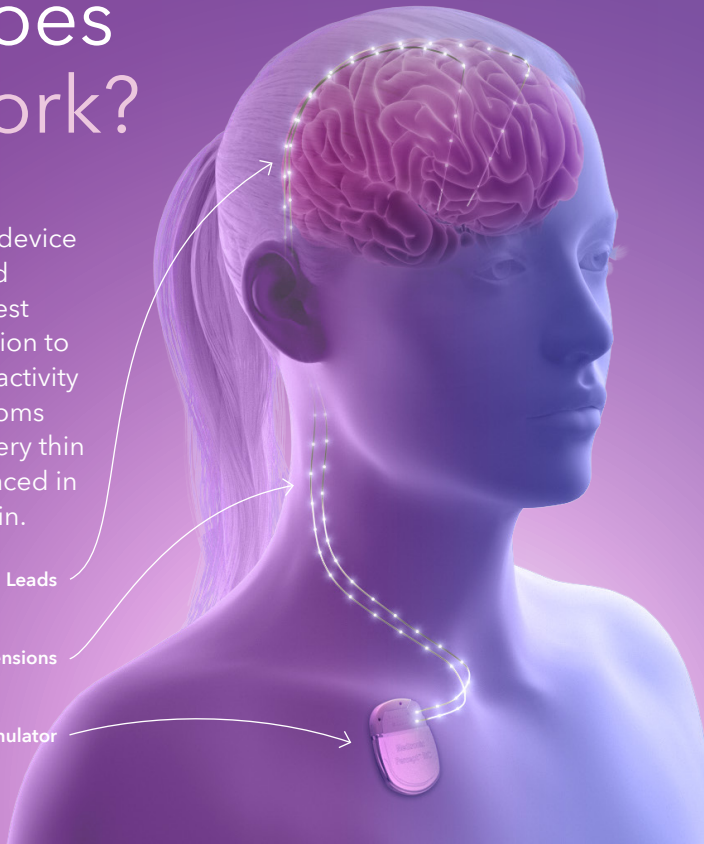
Always talk to your doctor about the benefits and risks of DBS therapy.

† Of the head and neck

How does DBS work?

A small pacemaker-like device (neurostimulator) placed under the skin in the chest sends electrical stimulation to correct abnormal brain activity causing dystonic symptoms through extensions to very thin wires (leads) that are placed in specific areas of the brain.

Leads
Extensions
Neurostimulator



Who is a candidate?

To understand if DBS may be right for you, see a neurologist who is experienced with DBS. Usually, these doctors are movement disorder specialists.

DBS may be right for someone who:

- Has chronic dystonia
- Has been unable to successfully manage their symptoms with oral and/or injectable medications
- Has primary dystonia, including generalized, segmental dystonia of the head and neck, and cervical dystonia (torticollis) in adult patients

Always talk with your doctor about diagnosis and treatment information.

Talking to a doctor about DBS

Whether you see a general neurologist or movement disorder specialist, be honest about your symptoms and how your current treatment is working. Ask about other options you could try and don't hesitate to get different opinions.

Here are a few questions to help prepare for your appointment:

- How severe do my symptoms need to be before I think about DBS therapy as an option?
- How does DBS compare to other treatment options?
- If I wait, will DBS therapy always be an option for me?
- What happens during the implant procedure?
- What is the recovery process like?
- How does the stimulation get adjusted?
- How often will I need to return for follow-up visits?
- For how long will DBS therapy help alleviate my symptoms?
- What are the risks?

Why Medtronic DBS for dystonia?

Medtronic has been serving people living with dystonia for more than 20 years.†

Our commitment to you

As the originator and world leader in DBS for over 30 years, we are proud to have served over 200,000⁷ people living with various conditions with our life-changing therapy.

/// DBS is very life-changing for patients and for their family. ///

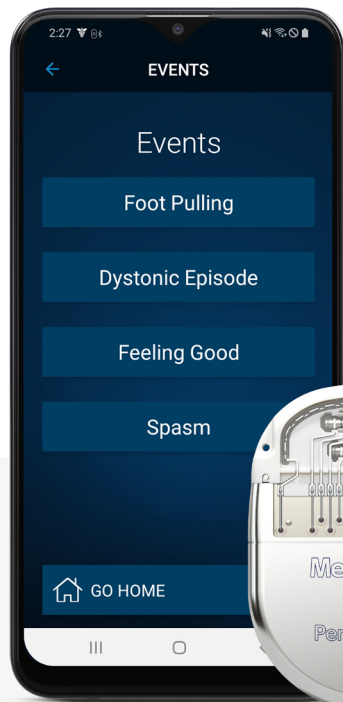
– DBS Neurosurgeon

† FDA approved for safety and probable benefit in 2003; FDA approved for safety and effectiveness in 2025.



Medtronic DBS offers:

Patient programmer



Sensing technology[†] that enables clinicians to **personalize and adapt therapy** to your individual needs.



Designed small for comfort with the **smallest, thinnest rechargeable** DBS neurostimulator available.[‡]



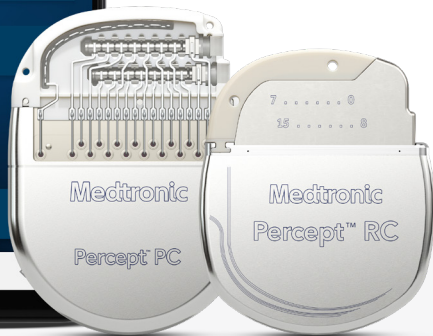
Continuous symptom relief
Medtronic DBS works 24/7, ensuring symptom control even while you sleep.



Reversible and adjustable
Medtronic DBS therapy **can be adjusted to your needs**.



Battery power
Choice of recharge-free (PC) battery or rechargeable (RC) battery with 15-year service life.



Percept™ PC and Percept™ RC neurostimulators

We offer the only DBS system for dystonia in the U.S. that is:

- FDA approved for safety and effectiveness
- FDA approved to treat dystonia symptoms in adult and pediatric patients age 12 and older

[†] The sensing feature of the Percept™ PC system and Percept™ RC system is intended for use in patients receiving DBS where chronically recorded bioelectric data may provide useful, objective information regarding patient clinical status. Signal may not be present or measurable in all patients treated for dystonia.

[‡] Percept™ RC as compared to Boston Scientific Vercise Genus™ R16 (MP92328632-10 REV A), accessed February 24, 2026, and Abbott Liberta RC™ IPG (ARTEN600340313 B), accessed February 24, 2026.

MRI access

While DBS itself does not cause you to need an MRI, there are many reasons you may need MRI access in the future. For example, you may need an MRI to evaluate, diagnose, or treat diseases and injuries.

Medtronic offers the world's first full-body MRI capable DBS device portfolio,^{§,8} including:

- Access to 1.5T and 3T MRI scans for when you need high-quality imaging[§]
- Ability for DBS therapy to remain on (in bipolar mode) during an MRI scan[§]

Why MRI access matters

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movement disorder patients who are eligible for DBS therapy may need an MRI within 10 years following their implant.⁹

[§] Medtronic DBS Systems are MR Conditional. Refer to product labeling for full list of conditions. <https://manuals.medtronic.com/manuals/mri/region>.



A journey with dystonia

**You are not alone, and
every experience is different.**



Diagnosis and
initial treatment



Deciding if
DBS is right



DBS procedure
and management

Meet Jessa

Jessa works as an engineer and is no longer able to work or drive as a result of her worsening dystonia symptoms. It is becoming harder for her to clean up around her house and confidently pick up her toddler when he needs her help.

Actual patient not pictured.

Jessa's journey with dystonia

Patient experiences and results may vary. Always be sure to talk to your physician about the risks and benefits of Medtronic DBS.



Diagnosis and initial treatment

- ✓ **Finding the right specialist:** Dystonia can often be misdiagnosed, and finding the right specialist can be a lengthy process. It is important for Jessa to get in touch with a movement disorder specialist.
- ✓ **Treatment trials:** In consultation with her doctor, Jessa tries medications and injections. She receives rehabilitative treatment from occupational and physical therapists to manage her symptoms. While Jessa finds some relief in a multi-treatment approach, she seeks additional treatment options in hopes of more impact.



DBS procedure and management

- ✓ **Implant procedure:** Jessa undergoes DBS surgery to place thin leads in the target area of the brain and implant a small device under the skin in her chest or abdomen.
- ✓ **Initial programming:** Jessa begins seeing a healthcare professional who starts programming her device to establish safe and comfortable settings.
- ✓ **Programming adjustments:** It takes time for Jessa to feel symptom relief and every patient responds differently. Jessa and her doctor can adjust her device over time to ensure optimized symptom relief as her symptoms change.



Deciding if DBS is right

- ✓ **Advanced treatment options:** Jessa considers further treatments with her specialist, and DBS is recommended.
- ✓ **Consideration:** Jessa speaks with patient ambassadors who have dystonia and who have undergone DBS.
- ✓ **Decision to get DBS:** After her pre-operative assessment, Jessa learns she is a candidate for DBS therapy for dystonia and, along with her doctor, decides to move forward.

Jessa is responding to her DBS therapy. She notices quality of life improvements and is regaining her independence.



Actual patient not pictured.



Actual patient not pictured.

Take your next step

Talk to your neurologist or movement disorder specialist to learn if you are a candidate for Medtronic DBS therapy for dystonia.

Discover more at
[medtronic.com/dystonia](https://www.medtronic.com/dystonia)



The evidence and claims made refer to an adult population. To learn more about DBS Therapy for children with dystonia, visit the website above.

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Brief Statement: Medtronic DBS Therapy for Dystonia

Patients should always discuss the potential risks and benefits with a physician.

Medtronic DBS Therapy for Dystonia: Medtronic DBS Therapy for Dystonia is indicated for bilateral stimulation of the internal globus pallidus (GPi) as an aid in the management of chronic, intractable (oral and/or injectable medication refractory) primary dystonia, including:

- generalized dystonia, segmental dystonia of the head and neck, and cervical dystonia (torticollis) in adult patients.
- generalized dystonia in pediatric patients twelve years of age or above.

Placing the DBS system requires brain surgery, which can have serious and sometimes fatal complications including bleeding inside the brain, stroke, seizures, and infection. Once implanted, infection may occur, parts may wear through your skin, and the lead and/or extension connector may move. Medtronic DBS Therapy could stop suddenly because of mechanical or electrical problems. Any of these situations may require additional surgery or cause symptoms to return, worsen or become life-threatening, as with status dystonicus, which requires immediate medical treatment. Pediatric patients may have increased risk of infections, device-related complications, revisions, and explants compared to adults. Medtronic DBS Therapy may cause new or worsening neurological or psychiatric symptoms.

In patients receiving Medtronic DBS Therapy for Dystonia, depression, suicidal thoughts, and suicide have been reported, although no direct cause-and-effect relationship has been established.

This therapy is not for everyone. Implantation of a DBS system is contraindicated (not allowed) for patients who will be exposed to diathermy (deep heat treatment) or transcranial magnetic stimulation. Magnetic Resonance Imaging (MRI) should only be performed as described in the product labeling. The DBS system may interact with other medical devices and other sources of electromagnetic interference which may result in serious patient injury or death, system damage or changes to the neurostimulator or to stimulation. The impact of DBS on overall brain development and behavioral changes in pediatric patients is unknown.

A prescription is required. Not everyone who receives DBS Therapy will receive the same results.

Rev 12/25

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