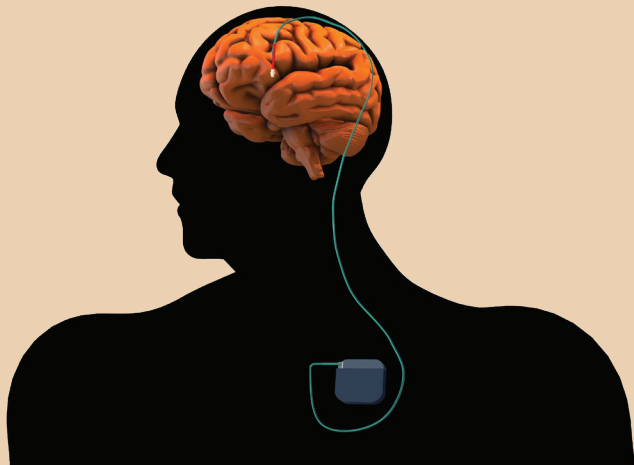


Obsessive-compulsive disorder (OCD)

Is a neuropsychiatric condition characterised by persistent intrusive thoughts, images or urges, known as obsessions. These lead to compulsions, which are repetitive mental or motor acts, or avoidance behaviours used to reduce anxiety. OCD has a lifetime prevalence of 2 to 3 per cent. It usually begins in childhood, puberty or early adult life and therefore affects a critical period of relational and academic development.

The standard treatment for OCD combines psychotropic medication and cognitive behavioural therapy (CBT). Medication typically includes serotonin reuptake inhibitors with antipsychotic augmentation. CBT mainly involves exposure and response prevention. However, around 10 per cent of patients continue to experience chronic and severe symptoms despite exhausting all available pharmacological strategies and completing intensive behavioural therapy. In this group of severely disabled patients, neurosurgical interventions have been considered as a potential treatment.

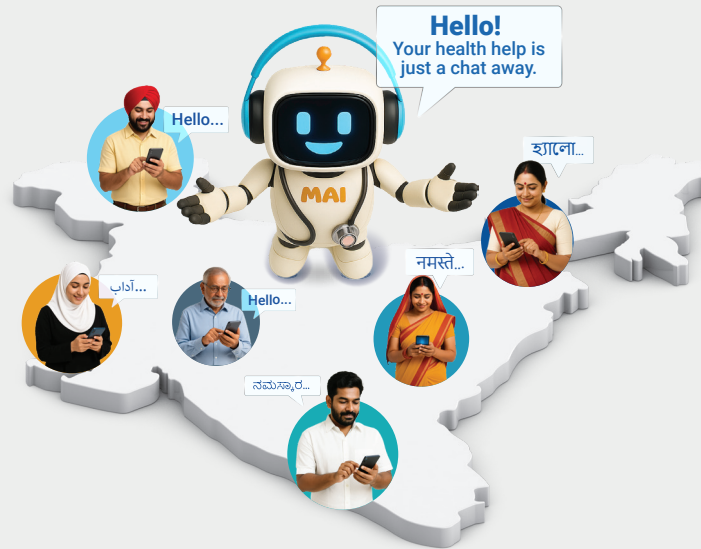
In deep brain stimulation (DBS), electrodes are placed in targeted areas of the brain. These electrodes are connected by wires to a pacemaker-like device called an implantable pulse generator. This device is placed under the skin of the chest below the collarbone. Once activated, the pulse generator sends continuous electrical pulses to the target brain areas. The DBS system functions in a similar way to a cardiac pacemaker and is often referred to as a pacemaker for the brain.



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All You Need to Know on Deep Brain Stimulation for Obsessive Compulsive Disorder



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LIFE'S ON

Who Should Consider Deep Brain Stimulation Surgery?

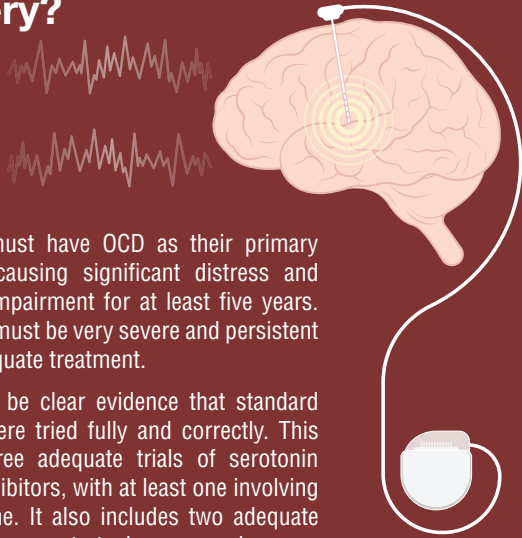
A person must have OCD as their primary diagnosis, causing significant distress and functional impairment for at least five years. Symptoms must be very severe and persistent despite adequate treatment.

There must be clear evidence that standard therapies were tried fully and correctly. This includes three adequate trials of serotonin reuptake inhibitors, with at least one involving clomipramine. It also includes two adequate augmentation strategies, such as antipsychotics or clomipramine addition. In addition, the individual must have completed at least 20 hours of OCD-specific cognitive behavioural therapy, particularly exposure and response prevention.

A psychiatric team must independently confirm that all treatments were adequate and that the OCD remains treatment resistant. Eligible patients must be between 18 and 75 years of age, able to give informed consent and have realistic expectations about the potential benefits and limitations of surgery.

Symptoms of Treatment Resistant OCD

Individuals with treatment resistant OCD continue to experience severe obsessions and compulsions that do not improve despite multiple treatments. These include intrusive and unwanted thoughts that cause intense anxiety. They also include repetitive behaviours such as washing, checking, counting or arranging, which feel impossible to control. Symptoms consume a large amount of time each day, disrupt work and personal life and may persist for years. Many individuals avoid triggering situations and may also experience worsening anxiety, depression or reduced insight.

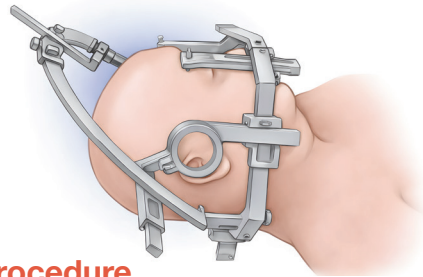


Symptoms Unlikely to Benefit From DBS

DBS is less effective for certain OCD symptom profiles. Individuals whose primary difficulty is hoarding, typically do not respond well. Reduced benefit is also seen in people with very poor insight, strong fixed beliefs in their fears, dominant severe depression, psychosis or substance use disorders. OCD driven mainly by “just right” feelings or bodily sensations, without clear intrusive thoughts, may also show weaker outcomes.

How Are Patients Chosen for DBS?

Patients are selected very carefully. DBS is offered only to individuals with long-standing and severe OCD who have not improved despite exhaustive standard treatments. These include multiple medications at appropriate doses, augmentation strategies and structured exposure and response prevention therapy. A psychiatric team reviews the patient’s history, confirms treatment resistance, verifies eligibility criteria, including age and capacity to consent and approves suitability for the procedure.



The Procedure

DBS surgery typically lasts several hours. For most patients, one electrode is placed on each side of the brain. A head frame is used during surgery to ensure precise placement. Small holes are drilled in the skull and two thin insulated wires with electrode contacts are inserted into the brain. The left brain lead controls symptoms affecting the right side of the body and vice versa. The electrode wires are tunnelled under the skin and connected to a neurostimulator placed under the skin of the chest.

Is Surgery Safe?

DBS is generally considered safe, although risks exist, as with any surgical procedure. These include infection around the device, bleeding in the brain or implant site and hardware-related complications. Most side effects are mild and temporary. These may include weight gain, difficulty finding words, reduced speech quality or device-related infections.

Surgical risks include brain haemorrhage, infection and misplacement or suboptimal placement of leads. Hardware-related

issues may involve lead movement, device failure, pain at the pulse generator site, battery failure, infection or skin erosion over the device.





Stimulation-related side effects can occur during device programming. Some patients experience temporary mood or behavioural changes, such as anxiety, low mood, irritability or impulsivity. These effects are often manageable through stimulation adjustments. Rarely, memory or cognitive changes or unwanted sensations may occur.

Expected Benefits

Most patients experience a meaningful reduction in OCD symptoms. This includes fewer intrusive thoughts, reduced anxiety and less compulsion to perform rituals. Many regain functional independence, return to work, engage socially and feel greater control over their thoughts and behaviour.

Improvements typically occur gradually over weeks to months and are often supported by continued therapy and medication. **While DBS is not a cure, many patients achieve a 40 to 60 per cent improvement in symptoms and an enhanced quality of life.**

Advantages of DBS Over Other Surgical Treatments

-  DBS does not cause permanent brain damage, unlike procedures such as thalamotomy or pallidotomy.
-  Stimulation is adjustable and reversible as symptoms or treatment responses change.
-  DBS preserves eligibility for future treatment options.
-  The device can be turned off at any time without long-term consequences.

Types of Hardware Available

Battery or Pulse Generator

- **Non-rechargeable:** lasts 3 to 4 years depending on settings and requires replacement when depleted.
- **Rechargeable:** requires regular charging & lasts 10 to 15 years.

Leads

- Unidirectional Directional