

How long-lasting are the benefits of RFA?
Benefits after RFA procedure are sustained for many **many years or permanent** in most patients. Hence, it's a **very cost-effective treatment**.

What is DBS?
Deep brain stimulation is **similar to RFA in the way it is done and its benefits**. But instead of ablating the target area of brain, a hair-thin electrode is implanted (just like the **pacemaker of heart**), which is connected to external battery implanted on chest wall. It continues to give pulsatile electrical signals to the brain circuits to improve its function. It is very useful in advanced cases of Parkinson's disease and selected cases of Dystonia, and is **much more expensive than RFA**. The patients **need regular follow-up visits for many years** for programming the device of DBS.

Why is RFA a path-breaking technique and a blessing for these patients?
The best things about RFA are the following:
1. It offers a very long-lasting or **permanent medicine-free cure** for above diseases.
2. RFA gives **remarkable improvement** in advanced and complex cases, at which stage, there are no other effective alternatives.
3. Patient has no hassle of frequent visits to hospital for programming, which is needed after putting in DBS device, hence RFA is **very cost-effective and saves time and effort**.
4. It is very **safe and comfortable**.
5. Above all, it helps the patient regain back his/her **dignity and pride** by making them independent for daily activities, hence integrating back into professional and social life.



Is RF Ablation treatment cost covered under medical insurance?

Yes, RF ablation is covered under medical insurance.

Why is SGVP Holistic Hospital the best hospital in Gujarat for treatment of all advanced and complex neurological disorders?

- 1. Pioneers :** We are the pioneers in RF Ablation - the key-hole, awake brain procedure for cure of various advanced brain disorders
- 2. Most advanced technology:** - First hospital of Gujarat to have the best German Technology AI-based Neuro navigation system '**Brain Lab**' and **Stereotactic Frame** with an investment equivalent to 4.5 crore to 5 crores.
- 3. Rare Highly Skilled Team of Doctors:** - RFA and DBS require **sub-Millimetric precision (in tune of a 100-micrometer)** and highly specialised skills to perform it. Our doctors **Dr. Sagar Betai** [Sr consultant neurologist & Director of Neurosciences Dept] & **Dr. Pulkit Purohit** [Functional Neurosurgeon] have trained in **Japan and Toronto for same**.
- 4.** NGO support to children from poor economic background:- SGVP Holistic Hospital, being a trust hospital and non-profit organisation has gathered funds to support treatment of **children under 18 years of age** if their annual family income is less than 2.5 lakhs. The philosophy behind this exercise is to provide this cutting-edge treatment to **all who need it in Indian society**, irrespective of their socio-economic status.





DR. SAGAR BETAI
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Consultant Neurologist
Director - Neuroscience Department
Head, Division Of Neuromodulation

*“ Dear friends,
I feel happy and proud to tell you that the department of Neurosciences at SGVP Holistic Hospital has revolutionized the care for Brain disorders. We are well-equipped to deliver futuristic high-tech care for all complex neurological disorders, which is way ahead of its time, but with a 'Human touch'. Most importantly, we remain fully committed to bring back the Smile on your and your family's faces! Thank you for trusting us! ”*

Led By

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NEURO-MODULATION DEPARTMENT

(Pioneering RF Ablation and AI-Based BrainLab Technology)



"Restoring Movement, Restoring Lives"

sgvp Holistic Hospital

ABOUT DEPARTMENT OF NEUROMODULATION

This department is **Gujarat's First**, which would not only be equipped for treating adults but also children who are suffering from various complex and refractory neurological diseases with the most recent and advanced technological therapy namely Neuromodulation, mainly the **Radio Frequency Ablation [RFA]**. While the department would also provide holistic treatment in the form of **Deep Brain Stimulation [DBS]**, medicines, physiotherapy and rehabilitation.

What are the uses of RF Ablation in neurological diseases?

In early to moderate stages of most neurological diseases, medicinal treatment and physiotherapy work well. As these diseases progress to advanced and complex stages, above treatment offers only little relief. At such advanced stages of following diseases, RFA acts like a blessing in such patients' lives.

- Movement disorders:** Essential tremor, Dystonia, writer's cramp & musician's Dystonia, selected cases of Parkinson's disease, chorea
- Pain:** Refractory and excruciating cancer-related pain, chemotherapy or any drug-induced neuropathy, post-stroke pain
- Psychiatric disorders:** OCD (Obsessive compulsive disorder), drug addictions, severe depression
- Epilepsy:** selected cases of drug-refractory epilepsy cases

WHAT ARE MOVEMENT DISORDERS AND ITS MAJOR TYPES?

Movement disorders are nervous system conditions that affect a person's movement, generally causing increased movements, which are involuntary (beyond a person's control). Following are major types:

They are Tremor, Dystonia, Task Specific Dystonia (writer's cramp/musician's Dystonia) and Parkinson disease.



What is Tremor?

A tremor involuntary shaking or trembling movements in one or more parts of your body. It most often affects the hands. It is the most common type of movement disorder. Tremor generally starts in 2nd or 3rd decade of life and gradually increases with age as he/she crosses 40-50 years of age.



What is Dystonia?

In Dystonia, there is an involuntary muscle repetitive or twisting movements of various body parts. Patient may have twisting of hands/arms, feet/legs, trunk, neck or face and mouth. It generally affects children in 1st and 2nd decade of life, but sometimes may also start after 40 years of age.

What is Task Specific Dystonia?

Task Specific Dystonia are characterized by Dystonia specifically while doing certain specific tasks like writing, playing musical instruments etc.. Depending on which tasks are affected, it is called **writer's cramp or musicians dystonia**. It happens in young people between 20-40 years of age.



What is Parkinson's Disease?

It's a degenerative brain disorder that causes slowness of overall body movements and walking speed, small steps, stiff body and tremor. It generally starts after 40-50 years of age and keeps progressively worsening over next few decades of life.

How does these diseases affect the quality of life of the patients?

The wonder is people think that it has something to do with their mental development and blame it on their destiny. Parents of children with **writer's cramp** think their children are making **excuses for not appearing in exams**, patients with **musician's Dystonia** think they are **failure as musicians and quit their careers**. Patients with **severe tremor, Dystonia and Parkinson's disease** have significant disability such that they are **dependent on** their family for basic tasks like eating, drinking water/tea and grooming. To make matters worse, medicinal treatment or physiotherapy offers little help at this stage.

Hence, these patients become **less confident, depressed, frustrated and isolated as** they stop participating in the social meetings and submit themselves to their 'fate'. They drop out of their **education, become jobless and dependent on family financially, physically and emotionally**. Even their family is agonised to see the patient in this condition, who was once that strong figure of the family as their father or mother.

What is the need for such procedure in Indian society?

The disease burden of various movement disorders, epilepsy, severe painful conditions like cancer pain, chemotherapy or drug-induced pain and advanced psychiatric conditions like OCD, severe depression and drug addictions is very huge in India. Most importantly, these are **chronic, crippling diseases which affect quality of life of the patient and family combined**; and carry emotional and financial burden on the whole family for decades.

There are approximately **25-30 lakh** people suffering from

above conditions in the state of **Gujarat and Rajasthan each**. We lack awareness and technological skill-set and infrastructure as well to cure them. **Hence, the cutting-edge techniques of Neuromodulation like RFA and DBS are need of the hour in India.**

What are different treatment modalities for treatment of movement disorder?

	Stage of disease	Required Treatment
	Early Moderate Stage	Medicine & Physiotherapy
	Advanced Stage	RFA / DBS

What is RF Ablation procedure?

Radio frequency ablation is a powerful type of Neuromodulation, through which we target specific parts of brain, which are dysfunctional and responsible for causing tremor, dystonia, pain etc. **these targets are very small (few millimetres)**, and the whole process of targeting is done in **superbly precise manner** by neuro-navigation system. We are the **1st hospital in Gujarat**, and one of very few in country, to acquire **German technology** AI based neuro-navigation called '**BrainLab**'.

How is RF Ablation done?

The whole pathway of entering the brain and reaching the **target is planned very accurately in 3-dimensional space** before procedure. A 1-2mm thin electrode is passed through a **key-hole** in skull. The tiny target area of brain is ablated on reaching there. Meanwhile, as the patient is **awake and comfortable, we check for live benefits in tremor or dystonia and confirm there are no side effects**, before ablating the target. It is a **pain-less and blood-less procedure**, and the patient is conscious, comfortable throughout the procedure. The procedure lasts for around 1-2 hours. The patient **can perform all his daily activities right after the procedure.**