

Essential tremor treatment

- Understanding the public knowledge and awareness of parkinson's disease in Ireland: a cross-sectional survey
- Patient, target, device, and program selection for DBS in Parkinson's disease: advancing toward precision care
- Tremor Asymmetry and the Development of Bilateral Phase-Specific Deep Brain Stimulation for Postural Tremor
- Efficacy and safety of multiple-target deep brain stimulation in non-parkinsonian movement disorders: a systematic review
- MRI-guided Focused Ultrasound VIM Thalamotomy with Indwelling GPi DBS Electrodes: A Case Report
- Robot-assisted deep brain stimulation with intraoperative CT imaging and frameless registration module: a new gold-standard?
- Influence of statistical approaches on Probabilistic Sweet Spots computation in Deep Brain Stimulation for severe Essential Tremor
- Wearable peripheral nerve stimulator reduces essential tremor symptoms through targeted brain modulation

Medical treatments for essential tremor aim to reduce or control the severity of tremors. Here are some common medical treatment options:

Beta-Blockers:

Examples: Propranolol and primidone Mechanism: Beta-blockers, commonly used for heart conditions, can help reduce tremors by affecting the action of certain neurotransmitters in the brain.

Anticonvulsants:

Examples: Primidone, topiramate, and gabapentin Mechanism: These medications, initially developed to treat seizures, may be effective in reducing tremors. Primidone is particularly commonly used.

Gabapentin:

Mechanism: Originally developed to treat seizures, gabapentin may help in reducing tremors associated with essential tremor. Topiramate:

Mechanism: Another anticonvulsant, topiramate, has been used off-label for essential tremor. It is believed to affect neurotransmitters in the brain. Botulinum Toxin Injections:

Mechanism: Injecting small amounts of botulinum toxin into specific muscles can help reduce tremors. This treatment is typically reserved for focal hand tremors. Cognitive Behavioral Therapy (CBT):

Mechanism: While not a medication, cognitive-behavioral therapy can help individuals manage the emotional and psychological impact of essential tremor. Lifestyle Modifications:

Avoiding Triggers: Identifying and avoiding factors that can exacerbate tremors, such as caffeine or stress, may help manage symptoms. Improving Sleep: Ensuring adequate sleep can sometimes have a positive impact on tremor severity. Occupational Therapy:

Techniques: Occupational therapists can teach individuals specific techniques and strategies to improve daily functioning despite the tremors. It's important to note that the effectiveness of medications can vary from person to person. Additionally, some individuals may experience side effects that limit the use of certain medications. In cases where medications are ineffective or not well-tolerated, surgical interventions like deep brain stimulation (DBS) may be considered. As with any medical condition, individuals with essential tremor should consult with a healthcare professional for a personalized evaluation and treatment plan.

Stimulation

[Thalamic stimulation](#) may be useful for tremors that are refractory to medical treatment, including tremor dominant [Parkinson's disease](#), essential tremor,^{1), 2)} cerebellar and [posttraumatic tremor](#)³⁾. Prior to being considered for surgical intervention, it should be determined that the patient has failed maximal medical therapy. Side effects of Vim stimulation include [paresthesias](#), H/A, [dysequilibrium](#), dysarthria, dystonia & localized pain.

Drug-resistant essential tremor (ET) can benefit from open standard stereotactic procedures, such as deep-brain stimulation or radiofrequency thalamotomy. Non-surgical candidates can be offered either high-focused ultrasound (HIFU) or radiosurgery (RS).

All procedures aim to target the same thalamic site, the ventro-intermediate nucleus (e.g., [VIM](#)). The mechanisms by which tremor stops after Vim RS or HIFU remain unknown.

Magnetic resonance guided focused ultrasound thalamotomy for essential tremor

[Magnetic resonance guided focused ultrasound thalamotomy for essential tremor.](#)

Deep brain stimulation for essential tremor

[Deep brain stimulation for essential tremor.](#)

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Schuurman PR, Bosch DA, Merkus MP, et al. Long-term follow-up of thalamic stimulation versus thalamotomy for tremor suppression. *Mov Disord*. 2008; 23:1146-1153

³⁾

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