

# What to know about essential tremor and dramatically reduce its impact

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The most important thing to know about essential tremor, or ET, is that although it can change your life, people with ET can still live life to the fullest.

An estimated seven million Americans are living with [essential tremor](#), which can cause shaking of the hands, head and voice. The tremor is generally mild at first, but for some people it can worsen over time and affect other [body parts](#).

As the tremor grows more pronounced, tasks we often take for granted—writing, preparing food, eating and drinking, grooming, getting dressed—can become increasingly challenging. In addition to physical disability, the tremor can bring about feelings of embarrassment, frustration or isolation.

While there isn't yet a cure for ET, Rush movement disorder neurologist Chandler Gill, MD, says there is reason to be hopeful: "We have many ways to help people compensate for or even dramatically reduce their tremor so it doesn't hold them back."

Here, Gill shares other important information about this common neurologic condition—including how people with ET, even those with more advanced disease, can get their tremor under control.

## **A challenging diagnosis**

The first step to addressing tremor is getting an accurate diagnosis. Since tremor is also a symptom of other neurological conditions, including Parkinson's disease and dystonia, and because there's no definitive test for ET, proper diagnosis isn't as simple as drawing blood or ordering imaging.

"The initial diagnosis is incorrect in up to 25 to 35% of people with tremor. I've seen people who have been diagnosed with Parkinson's who actually have long-standing ET, and those who are told they ET but actually have Parkinson's," Gill explains.

To determine whether a person has essential tremor or another condition, Gill conducts a comprehensive neurologic exam and looks for certain differentiating symptoms:

- Action tremor, or tremor that occurs when your muscles are in use. Tremor at rest may be a sign of other conditions like Parkinson's disease. During the exam, Gill may ask patients to lie down, perform mental calculations (like counting backwards), drink from a cup, use utensils or perform other tasks to see which circumstances bring out the tremor.
- Handwriting changes. Handwriting tests can help to distinguish between ET and Parkinson's disease, because each condition affects handwriting in a different way. You'll typically see large, shaky writing with ET, and writing that gets progressively smaller with Parkinson's.
- Other physical changes. Tremor accompanied by additional symptoms like slow movements, a stooped posture and walking problems like shuffling can signal Parkinson's disease.
- Improvement of the tremor after drinking alcohol. Some people with ET report that having an alcoholic beverage or two improves their tremor. This factor alone isn't enough to confirm whether you have ET, but a response to alcohol isn't typically seen with other forms of tremor.
- Family history of ET. Essential tremor is hereditary in about 50% of people, but the genetics are not fully understood. Even people with no family history can develop ET.

## **ET may not be benign**

Because it doesn't result in death, essential tremor used to be called "benign tremor." That term isn't used anymore, a nod to the fact that although ET isn't fatal, it's not necessarily harmless.

For people at the more severe end of the ET spectrum, their tremor can potentially impact almost every aspect of their lives.

"I've had patients tell me that their bank returned checks because the signature didn't match, and that they used to enjoy being handy around the house but now they can't even insert the tip of a screwdriver into the head of a screw," Gill explains. "Some patients have stopped socializing entirely, because they're worried that others are looking at them and judging them. For instance, sometimes it's assumed that the tremor is due to intoxication. It can be devastating, physically and emotionally."

And for some people, even seemingly mild tremor is disruptive.

"One of my patients is a surgical technician, and although her tremor was very mild clinically speaking, for her it was disabling because her job depends on having a steady hand," Gill says. "There are many professions—and, I should add, recreational activities—where even a slight tremor means you can't perform properly."

People with early-stage ET, however, often don't seek treatment. "They may hold off because they think they shouldn't—or don't need to—get help until the tremor worsens," Gill says. "They tell themselves, "I can live with it as it is now," "

While many people are able to lead a full, active life with ET, it's also important to know that you don't have to accept tremor as your new normal. Whether your tremor is mild, debilitating or anywhere in between, if it's affecting your quality of life, Gill recommends talking to a medical professional.

"There are treatment options for every stage of ET," she explains. "Getting an evaluation is the first step to getting a handle on your tremor."

## **Treatments can help tame tremor**

Because each person with ET is unique, care plans are always customized and are often multi-faceted.

Medical professionals such as movement disorder specialists, general neurologists, primary care doctors and occupational therapists can work with you to find the right combination of nonmedical, medical and surgical approaches to fit your physical needs, lifestyle and personal goals.

## **Coping strategies**

For instance, you may benefit from coping strategies, like the following:

- Learning to use your tremor-free hand to perform tasks or steady the tremoring hand, or using two hands
- Wearing wrist weights or using weighed utensils and pens
- Filling cups halfway and using lids to keep liquid from spilling
- Using voice commands on phones, computers and TVs

There are also more advanced tools available, such as Liftware: spoon handles and attachments that sense tremor and automatically stabilize and level the utensil to make it easier to transfer food from the plate or bowl to your mouth.

Lifestyle changes can help as well. For instance, people with ET are advised to avoid caffeine, which can cause a temporary increase in tremor, and find effective ways to de-stress, since stress tends to exacerbate tremor.

## **Reducing tremor with medications**

Medications are usually part of the treatment equation, although there's only one FDA-approved medication for ET: propranolol, a beta blocker.

The other primary medication used for essential tremor is the anti-seizure drug primidone. Both primidone and propranolol have been shown to reduce tremor by as much as 50%, and they can be used in combination to get an added benefit, according to Gill.

Other anti-seizure meds, like gabapentin and topiramate, as well as benzodiazepines (clonazepam and alprazolam), may also help to improve tremor.

## **Targeting tremor with procedures**

What medications rarely do, however, is eliminate the tremor. And for about half of people with ET, they aren't effective at all. "For more severe tremor or tremor that isn't responding to medications, we may recommend a procedure," Gill says.

While these procedures don't cure the underlying disease, they can dramatically reduce, and even eliminate, your tremor. There are two procedures most commonly used to treat ET:

- Deep brain stimulation (DBS), a surgery to implant electrodes in targeted areas within your brain. The electrodes are connected to a small device, called a pulse generator or neurostimulator, that is implanted under your skin, below your collarbone. Similar to a heart pacemaker, the device sends electrical signals to targeted areas of your brain to modify the activity causing your symptoms—and the signals can be adjusted over time, as needed. DBS can be used to treat both sides of the body.
- MR-guided focused ultrasound, an incisionless (non-invasive)



treatment that uses sound waves to target the ventral intermediate nucleus (VIM) of the thalamus. When these [sound waves](#) come together in the target, they generate sufficient energy to make a tiny lesion in your brain, resulting in a therapeutic effect. Unlike DBS, focused ultrasound is not open surgery, so it can be performed as an outpatient procedure. It has been FDA-approved for unilateral, or one-sided, treatment of both essential tremor and parkinsonian tremor.

"Focused ultrasound is much newer than DBS, but it's shown tremendous promise," says Gill, who evaluates patients for both procedures. "The biggest benefit is that it doesn't require incisions or anesthesia. So there's now a highly effective treatment option for people who aren't eligible for DBS because of their age or other health conditions, or who just don't want to have open surgery."

Rush, a longtime leader in DBS, is one of only a few centers in the Midwest currently offering focused ultrasound. The Rush focused ultrasound team completed their 50th focused ultrasound case in early March 2021.

"We've seen some dramatic results with both DBS and MR-guided focused ultrasound," Gill says. "ET can turn your life upside down, and it's gratifying to have patients tell me that after their procedure, they can do things they haven't been able to do for many years—even something as simple as pouring a glass of water, buttoning their shirt or writing their name. They feel like themselves again."

Provided by Rush University Medical Center

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