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### Patient information: Tremor (Beyond the Basics)

#### Author

Daniel Tarsy, MD

#### Section Editor

Howard I Hurtig, MD

#### Deputy Editors

John F Dashe, MD, PhD  
Constanza Villalba, PhD

#### Disclosures

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**TREMOR OVERVIEW** — Tremor is the repetitive, involuntary shaking of a body part, most commonly the hands or head. It can be a disorder in its own right, or it can be a sign of another health problem.

There are several different types of tremor, all of which fall into one of three main categories:

**Resting tremors** — Resting tremors happen while you are sitting or lying down and relaxed. People who have a resting tremor can usually stop the tremor by deliberately moving the affected body part.

**Postural tremors** — Postural tremors happen when you try to hold a body part still, against the force of gravity. If you have a postural tremor, your arms might shake if you hold them out in front of you.

**Action tremors** — Action tremors happen when you move deliberately.

Learning whether you have a resting, postural, or action tremor is the first step in discovering the cause of your tremor and its potential treatment. The different categories of tremor usually have very different causes.

More detailed information about tremor is available by subscription. (See "[Overview of tremor](#)" and "[Pharmacologic treatment of essential tremor](#)" and "[Surgical treatment of essential tremor](#)".)

#### MOST COMMON CAUSES OF RESTING TREMOR

**Parkinson disease** — The most common cause of resting tremor is Parkinson disease. If that is the cause of your tremor, your healthcare provider will probably focus on treating the Parkinson disease in the hopes that doing so will also alleviate the tremor.

In a few instances, people with Parkinson disease who have a resting tremor also have an action tremor. A detailed discussion of the treatment options for Parkinson disease appears elsewhere. (See "[Patient information: Parkinson disease treatment options — medications \(Beyond the Basics\)](#)".)

**Other causes** — Other possible causes of resting tremor include:

- Rubral tremor, caused by conditions that damage part of the brainstem
- Wilson disease, a rare inherited disease that causes copper to build up in the body (see "[Wilson disease: Diagnostic tests](#)".)

#### MOST COMMON CAUSES OF POSTURAL AND ACTION TREMORS

**Physiologic tremor** — Everyone, even people who are healthy, has a little bit of shaking of the hands, especially when performing precise tasks, like threading a needle or focusing a camera. This type of shaking, known as physiologic tremor, is not usually noticeable because it is so mild that it is not visible under normal circumstances.

Under some circumstances, physiologic tremor becomes exaggerated and therefore visible. Common causes of this exaggeration include:

- Certain medications, such as those used to treat asthma or other breathing problems, steroids (glucocorticoids), and some drugs used to treat neurologic or psychiatric disorders
- Stimulants, such as caffeine and nicotine
- Anxiety, excitement, fear, and other extreme emotions
- Muscle fatigue, which can happen after a challenging workout
- Alcohol or drug withdrawal
- Overactive thyroid (hyperthyroidism)
- Fever

Physiologic tremors caused by problems such as those listed above usually go away when the underlying cause is addressed. If the physiologic tremor is caused by a medication, it may not be possible to eliminate the medication, but it may be possible to switch the medication or to lower the dose.

**Essential tremor** — Essential tremor is the term healthcare providers use to describe tremors that do not seem to be physiologic (see above) or linked to another health problem. Scientists do not understand what causes essential tremor, but they do know that it can be passed on within families.

Essential tremor can start at any time in life, sometimes as early as childhood. More commonly, essential tremor becomes noticeable in the young adult or later years. The tremor tends to affect the hands and arms and can affect one side (left or right) more than the other.

People who have essential tremor usually shake when they try to hold their arms outstretched and still. They also tend to shake when they are doing a goal-directed movement, such as writing, drinking from a glass of water or touching their nose with their finger. In fact, the shaking tends to get worse as the person is about to reach his or her goal.

Essential tremor sometimes affects the head, resulting in a repeated "yes-yes" nod or a repeated "no-no" headshake. Usually, people who have these symptoms also have shaking in the hands or a tremor in the voice, although the head can be affected on its own. Rarely, the legs and upper body are affected.

Essential tremor is frequently called a "benign" tremor because it does not usually affect your ability to perform daily tasks. However, it can be severe enough in some people that it causes a serious limitation in lifestyle.

**Other causes** — Other possible causes of postural and action tremors include:

- Cerebellar tremors, caused by damage to a part of the brain called the cerebellum that helps to coordinate movements
- Intention tremor (also called kinetic tremor), which typically increases in severity as the hand moves closer to its target and is due to disturbances along the pathways that connect the cerebellum to other parts of the brain; the most common causes are multiple sclerosis, brainstem trauma, and stroke
- Primary writing tremor, which occurs exclusively while writing and not during other voluntary movements
- Orthostatic tremor, which is limited to the legs and occurs only while standing
- Disorders affecting the nerves outside the brain that control muscle movement
- Anxiety and other psychological problems

**TREMOR DIAGNOSIS** — To determine what type of tremor you have and what might be causing it, your healthcare provider will need to ask you a list of detailed questions about your tremor. He or she will probably ask:

- Does your tremor happen when you are resting, when you stand still, when you hold your arms outstretched, or

when you are moving?

- Are there activities or circumstances that make the tremor better or worse?
- Which body parts are affected? Are the left and right side are equally affected?
- When did the tremor start? Did the start-time coincide with any other symptoms, starting new medications, or any injuries or illnesses?
- Does drinking alcohol affect the severity of your tremor? (Some types of tremor, particularly essential tremor, improve temporarily with alcohol)

Your description of the tremor and your healthcare provider's observations of the tremor hold the most important clues about your condition. Your healthcare provider may recommend brain scans or blood tests to rule out certain problems, but there are no conventional lab tests that can diagnose Parkinson disease or essential tremor, the two most common causes of tremor.

To diagnose these conditions, a healthcare provider must rely on old-fashioned medical sleuthing and skilled observation. That's why it's so important that you share as many details as possible, even if they seem unimportant to you.

During the examination, your healthcare provider may ask you to stand and hold your arms outstretched, or ask you to do other things that might elicit or worsen the tremor. For instance, he or she may ask you to touch your nose with one finger, or to show a sample of your handwriting. Seeing how the tremor changes under these circumstances can help determine what the cause of your tremor might be.

**Lab tests** — Because tremor is sometimes caused by another medical problem, your healthcare provider may recommend tests to check for one or more of those conditions. For example, he or she may order:

- Blood tests to measure thyroid hormone levels or to check for copper or other metals in the blood
- Brain scans to check for tumors, strokes, or other types of brain damage

**TREMOR TREATMENT** — If a tremor is caused by another medical problem, treating that problem (assuming it can be treated) sometimes helps alleviate the tremor, too. For example, people whose tremor is caused by excess thyroid hormone often stop shaking when their hormone levels are restored to normal.

Likewise, people whose tremor is caused by Parkinson disease sometimes improve when they begin treatment for the disease. (See "[Patient information: Parkinson disease treatment options — medications \(Beyond the Basics\)](#)".)

**Essential tremor** — Essential tremor occurs on its own and cannot be explained by other underlying health problems. Even so, treatments for essential tremor exist. In particular, the medications [propranolol](#) (Inderal®, InnoPran XL™) and [primidone](#) (Mysoline®) may be effective in reducing essential tremor. (See "[Pharmacologic treatment of essential tremor](#)".)

If medications do not work well enough and the tremor is severe and disabling, a neurosurgical procedure called deep brain stimulation may be an option. This treatment requires surgery to place small electrical stimulators into the brain. (See "[Surgical treatment of essential tremor](#)".)

**WHERE TO GET MORE INFORMATION** — Your healthcare provider is the best source of information for questions and concerns related to your medical problem.

This article will be updated as needed on our web site ([www.uptodate.com/patients](http://www.uptodate.com/patients)). Related topics for patients, as well as selected articles written for healthcare professionals, are also available. Some of the most relevant are listed below.

**Patient level information** — UpToDate offers two types of patient education materials.

**The Basics** — The Basics patient education pieces answer the four or five key questions a patient might have about a given condition. These articles are best for patients who want a general overview and who prefer short, easy-to-read materials.

[Patient information: Tremor \(The Basics\)](#)

[Patient information: Myoclonus \(The Basics\)](#)

[Patient information: Fragile X syndrome \(The Basics\)](#)

**Beyond the Basics** — Beyond the Basics patient education pieces are longer, more sophisticated, and more detailed. These articles are best for patients who want in-depth information and are comfortable with some medical jargon.

[Patient information: Parkinson disease treatment options — medications \(Beyond the Basics\)](#)

**Professional level information** — Professional level articles are designed to keep doctors and other health professionals up-to-date on the latest medical findings. These articles are thorough, long, and complex, and they contain multiple references to the research on which they are based. Professional level articles are best for people who are comfortable with a lot of medical terminology and who want to read the same materials their doctors are reading.

[Classification and evaluation of dystonia](#)

[Clinical manifestations of Parkinson disease](#)

[Diagnosis of Parkinson disease](#)

[Overview of tremor](#)

[Pharmacologic treatment of essential tremor](#)

[Surgical treatment of essential tremor](#)

[Wilson disease: Diagnostic tests](#)

The following organizations also provide reliable health information.

- National Library of Medicine

([www.nlm.nih.gov/medlineplus/tremor.html](http://www.nlm.nih.gov/medlineplus/tremor.html))

- The International Essential Tremor Foundation

([www.essentialtremor.org](http://www.essentialtremor.org))

- National Institute of Neurological Disorders and Stroke

([www.ninds.nih.gov/disorders/tremor/detail\\_tremor.htm](http://www.ninds.nih.gov/disorders/tremor/detail_tremor.htm))

- Worldwide Education & Awareness for Movement Disorders (WEMOVE)

([www.wemove.org](http://www.wemove.org))

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## REFERENCES

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2. Zesiewicz TA, Elble R, Louis ED, et al. Practice parameter: therapies for essential tremor: report of the Quality

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