

Tremor Information Guide



INDIAN ACADEMY OF
NEUROLOGY

A Public Information Initiative

Tremor is an unintentional, rhythmic muscle movement involving to-and-fro movements (oscillations) of one or more parts of the body. It is the most common of all involuntary movements and can affect the hands, arms, head, face, voice, trunk, and legs. Though not life-threatening, it causes significant distress and embarrassment to the affected individual.

A useful way to understand and describe tremors is to define them according to the following types:

- *Resting tremor* occurs when the muscle is relaxed. It may be seen as a shaking of the limb, even when the person is at rest. Often, the tremor affects only the hand or fingers, commonly seen in patients with Parkinson's disease.
- An *action tremor* occurs during any type of movement of an affected body part.
- *Postural tremor* occurs when the person maintains a position against gravity, such as holding the arms outstretched.
- *Kinetic tremor* appears during movement of a body part.
- *Task-specific tremor* appears when performing highly-skilled, goal-oriented tasks such as writing or speaking.

Tremor is most commonly classified by its appearance and cause or origin. Some of the better-known forms of tremor along with their symptoms include the following:

Essential tremor

Essential tremor (sometimes called benign essential tremor) is the most common of the form of abnormal tremor. In some people, the tremor may be mild and non-progressive over a long period of time, while in others, the tremor is slowly progressive, starting on one side of the body but affecting both sides within a few years. The hands are most often affected, but the head, voice, tongue, legs, and trunk may also be involved, typically to a lesser extent than the hands. Tremor of the hands is typically present as an action tremor. Head tremor may be seen as a “yes-yes” or “no-no” motion. The onset is most common after age 40, although symptoms can appear at any age. It may occur in more than one family member. Children of a parent who has essential tremor have a 50 percent chance of inheriting the condition.

Tremor in Parkinson's Disease

Tremor in Parkinson's disease is caused by damage to structures within the brain that control movement. This tremor, which appears characteristically as a resting tremor, can occur as an isolated symptom or be seen in other disorders. This is often the first symptom of Parkinson's disease (more than 25 percent of people with Parkinson's disease have an associated action tremor). The tremor, which is classically seen as a “pill-rolling” action of the hands may also affect the chin, lips, legs, and trunk, and can be markedly increased by stress or emotions.

Tremor in Dystonia

Dystonic tremor occurs in individuals of all ages who are affected by a movement disorder in which sustained involuntary muscle contractions cause twisting and repetitive motions and/or painful and abnormal postures or positions, such as twisting of the neck (torticollis) or writer's cramp. Dystonic tremor may affect any muscle in the body and is most often seen when the patient is in a certain position or moves in a certain way.

Cerebellar Tremor

Cerebellar tremor is a slow tremor of the extremities that occurs at the end of a purposeful movement (intention tremor), such as trying to press a button or touching a finger to the tip of one's nose. Cerebellar tremor is caused by lesions in or damage to the cerebellum resulting from stroke, tumor or disease such as multiple sclerosis or some inherited degenerative disorder. It can also result from chronic alcoholism or overuse of some medicines.

Psychogenic Tremor

Psychogenic tremor (also called functional tremor) can appear as any form of tremor movement. The characteristics of this kind of tremor may vary, but generally include sudden onset and remission, increased incidence with stress, change in tremor direction and/or body part affected, and significantly decreased or disappearing tremor activity when the individual is being distracted.

Orthostatic Tremor

Orthostatic tremor is characterized by rhythmic muscle contractions that occur in the legs and trunk immediately upon standing. The person typically perceives orthostatic tremor as unsteadiness rather than actual tremor.

Tremor can result from other conditions as well. Alcoholism - excessive alcohol consumption or alcohol withdrawal - can kill certain nerve cells resulting in tremor, especially in the hand. Some tremors respond to treatment of the underlying condition. For example, in some cases of psychogenic tremor, treating the patient's underlying psychological problem may cause the tremor to disappear.

Treatment

There is no permanent cure for the tremors. Symptomatic drug therapy is available for several forms of tremor.

- Drug treatment for parkinsonian tremor involves levodopa and/or dopamine-like drugs such as pramipexole or ropinirole. Other drugs used to lessen parkinsonian tremor include amantidine hydrochloride and anticholinergic drugs.
- Essential tremor may be treated with propranolol – an antihypertensive, or primidone - an anticonvulsant drug.
- Cerebellar tremor, typically, does not respond well to medical treatment.
- Dystonic tremor may respond to clonazepam, anticholinergic drugs, and intramuscular injections of Botulinum toxin. The latter is also prescribed to treat voice and head tremors, and several movement disorders.
- Clonazepam and primidone may be prescribed for primary orthostatic tremor.

Eliminating tremor "triggers" such as caffeine and other stimulants from the diet is often recommended. Surgical intervention such as thalamotomy and deep brain stimulation (DBS) may ease certain tremors. These surgeries are usually performed only when the tremor is severe and cannot be controlled satisfactorily with drugs. Deep brain stimulation, the most common form of surgical treatment of tremor, uses implantable electrodes to send high-frequency electrical signals to the thalamus. A battery-operated device called a neurostimulator is used to deliver electrical stimulation to targeted areas in the brain that control movement.

Disclaimer:

This brochure is for the general information of the public and the patients. People should not self-medicate themselves with the medicines and treatments mentioned here. Before taking any of the medications mentioned in the information brochure, please consult your neurologist

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