



Medicine for Managers

Dr Paul Lambden

BSc MB BS BDS FDSRCS MRCS LRCP DRCOG FIHSCM

Tremor

A tremor is a neurological condition which involves involuntary rhythmic trembling or shaking movements in one or more parts of the body. The hand is the most common site of a tremor although it can occur in the arms, legs or head as well as in other parts of the body. It may be mild or severe and intermittent or continuous. It may occur as an isolated symptom or may be part of another disorder.

In itself, tremor is not serious or life-threatening but at the more severe end, it may cause challenges with daily tasks such as writing, eating, shaving or even dressing and may result in disabilities.

Most people naturally have a slight tremor, observable in the hands if the arms are held out in front.

This is normal and is called a **physiological tremor**. The hands are not completely still.

Tremor is not life-threatening and is more noticeable following the consumption of coffee or alcohol or if tired or anxious, or experiencing severe stress or strong emotion. The voice may appear tremulous and the individual may have trouble holding utensils or tools. It tends to worsen with increasing age.

Tremors are classified according to when and how the tremor is activated.

They may be divided into:

- **Rest Tremor**
- **Action Tremor.**

A resting tremor occurs when the body part is relaxed and supported. For example, if when resting the arm on a table, it is shaky, that is a resting tremor.

People with Parkinson's Disease often experience a resting tremor.

An action tremor occurs when voluntarily moving muscles in part of the body. For example, if the arm is deliberately lifted and it starts shaking, that is an action tremor.

Tremor becomes significant if it affects or compromises daily activities.

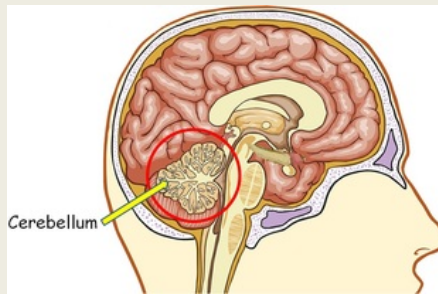
Some tremors, like an **essential tremor**, only have tremor as a symptom. It is common and patients display tremor in both hands and arms

when undertaking activities, but with no other neurological signs. It may also affect the head or lower limbs and sometimes the voice. It can start at any age, but often appears during late teenage years or between 40 and 50.

It may be mild and remain mild but in others, it may slowly worsen over time.

It is inherited in 50-75% of cases and is known as a **familial** tremor, such cases often appearing early in life.

The cause of essential tremor is not confirmed but there is evidence to suggest that the tremor is accompanied by mild degeneration of the **cerebellum**, the part of the brain which controls movement.



Action tremors occur when a muscle is moved voluntarily. They are classified into subtypes, but there is overlap in the classification.

- **Postural Tremor.** This happens when a body part is held in a position against gravity, such as when the arms are held straight outstretched.
- **Isometric Tremor.** This occurs during a voluntary contraction of muscle, but does not involve movement, such as like holding a heavy object in the same position.
- **Kinetic Tremor.** This is associated with voluntary movement, such as raising the wrist from a table or opening and closing the eyes.

It may be:

- **Intentional**, i.e. an intended movement such as touching the nose with the finger
- **Task-Specific**, i.e. when performing specific tasks such as handwriting

The Cause of Tremor

There are a number of possible causes:

- **Alcohol use and withdrawal**
- **Brain tumours, particularly cerebellar**
- **Metabolic conditions.** These include hyperthyroidism, or disturbances in calcium, glucose or magnesium blood levels
- **Neurodegenerative diseases** such as Parkinson's disease or multiple sclerosis
- **Stroke**
- **Brain trauma** following head injury
- **Medications** including some asthma medication, steroids, some mental health medications and chemotherapy. Caffeine may cause a temporary tremor
- **Stress, anxiety or fatigue** may result in the induction of a tremor

Diagnosis of Tremor

Essential to the diagnosis is a physical face-to-face examination by a doctor, which will include the following questions during the medical history.

1. Did the tremor start suddenly or slowly worsen over time?
2. Which areas of the body are involved in the tremor?
3. Do certain factors trigger a tremor, such as being at rest, standing or moving?
4. Do any factors change the nature or severity of the tremor, such as stress, anxiety, caffeine or being distracted?

5. Did the tremor start as a result of the use of any specific medications?

A comprehensive medical examination will be required because tremor is associated with a wide range of pathologies and may be one manifestation of a general disease, such as Parkinson's disease, a specific disorder, such as a stroke, or raise the suspicion of a tumour or other metabolic disorder.

Initial examinations will include:

- Blood tests
- Urinalysis
- CT or MRI scan of the brain.
- Nerve conduction studies

Treatment of Tremor

Treatment depends largely on the type and the underlying cause of the symptom.

There is no cure for tremor but some treatments can help with the management of symptoms, including by controlling the underlying condition.

There is no treatment is available for ***cerebellar tremor***.

Various treatments for other forms of tremor include:

- Botulinum Toxin
- Beta-blocking drugs
- Benzodiazepines, often with psychotherapy or occupational therapy
- Anti-convulsant medication
- Levodopa for Parkinsonian tremor

If medication or substances such as alcohol or caffeine are inducing the tremor or making it worse, stopping may improve the symptom. Treatments for metabolic disorders which cause the tremor may make it diminish or cease.

Tremor is often a distressing as well as inconvenient symptom which may have a range of adverse personal consequences including difficulties with home life, work activity and social activities.

Management may be through a range of approaches including seeing the GP or a specialist to monitor medication, perhaps joining a support group if available, and reducing personal stress if possible.

paullambden@compuserve.com