

Essential Tremor

Subjects: Genetics & Heredity

Contributor: Nicole Yin

Essential tremor is a movement disorder that causes involuntary, rhythmic shaking (tremor), especially in the hands. It is distinguished from tremor that results from other disorders or known causes, such as Parkinson disease or head trauma. Essential tremor usually occurs alone, without other neurological signs or symptoms. However, some experts think that essential tremor can include additional features, such as mild balance problems.

Keywords: genetic conditions

1. Introduction

Essential tremor usually occurs with movements and can occur during many different types of activities, such as eating, drinking, or writing. Essential tremor can also occur when the muscles are opposing gravity, such as when the hands are extended. It is usually not evident at rest.

In addition to the hands and arms, muscles of the trunk, face, head, and neck may also exhibit tremor in this disorder; the legs and feet are less often involved. Head tremor may appear as a "yes-yes" or "no-no" movement while the affected individual is seated or standing. In some people with essential tremor, the tremor may affect the voice (vocal tremor).

Essential tremor does not shorten the lifespan. However, it may interfere with fine motor skills such as using eating utensils, writing, shaving, or applying makeup, and in some cases these and other activities of daily living can be greatly impaired. Symptoms of essential tremor may be aggravated by emotional stress, anxiety, fatigue, hunger, caffeine, cigarette smoking, or temperature extremes.

Essential tremor may appear at any age but is most common in older adults. Some studies have suggested that people with essential tremor have a higher than average risk of developing neurological conditions including Parkinson disease or sensory problems such as hearing loss, especially in individuals whose tremor appears after age 65.

2. Frequency

Essential tremor is a common disorder, affecting up to 10 million people in the United States. Estimates of its prevalence vary widely because several other disorders, as well as other factors such as certain medications, can result in similar tremors. In addition, mild cases are often not brought to medical attention, or may not be detected in clinical exams that do not include the particular circumstances in which an individual's tremor occurs. Severe cases are often misdiagnosed as Parkinson disease.

3. Causes

The causes of essential tremor are unknown. Researchers are studying several areas (loci) on particular chromosomes that may be linked to essential tremor, but no specific genetic associations have been confirmed. Several genes as well as environmental factors likely help determine an individual's risk of developing this complex condition. The specific changes in the nervous system that account for the signs and symptoms of essential tremor are unknown.

4. Inheritance

Essential tremor can be passed through generations in families, but the inheritance pattern varies. In most affected families, essential tremor appears to be inherited in an autosomal dominant pattern, which means one copy of an altered gene in each cell is sufficient to cause the disorder, although no genes that cause essential tremor have been identified. In other families, the inheritance pattern is unclear. Essential tremor may also appear in people with no history of the disorder in their family.

In some families, some individuals have essential tremor while others have other movement disorders, such as involuntary muscle tensing (dystonia). The potential genetic connection between essential tremor and other movement disorders is an active area of research.

5. Other Names for This Condition

- benign essential tremor
- familial tremor
- hereditary essential tremor

References

1. Blair MA, Ma S, Phibbs F, Fang JY, Cooper MK, Davis TL, Hedera P. Reappraisal of the role of the DRD3 gene in essential tremor. *Parkinsonism Relat Disord*. 2008Aug;14(6):471-5. doi: 10.1016/j.parkreidis.2007.11.002.
2. Deng H, Le W, Jankovic J. Genetics of essential tremor. *Brain*. 2007 Jun;130(Pt6):1456-64.
3. Hawley JS, Robottom BJ, Weiner WJ. Essential tremor. *Rev Neurol Dis*. 2010Spring-Summer;7(2-3):e69-75. Review.
4. Jasinska-Myga B, Wider C. Genetics of essential tremor. *Parkinsonism Relat Disord*. 2012 Jan;18 Suppl 1:S138-9. doi: 10.1016/S1353-8020(11)70043-8. Review.
5. Lorenz D, Deuschl G. Update on pathogenesis and treatment of essential tremor. *Curr Opin Neurol*. 2007 Aug;20(4):447-52. Review.
6. Louis ED. Essential tremor. *Handb Clin Neurol*. 2011;100:433-48. doi:10.1016/B978-0-444-52014-2.00033-1. Review.
7. Shill HA, Adler CH, Beach TG. Pathology in essential tremor. *Parkinsonism Relat Disord*. 2012 Jan;18 Suppl 1:S135-7. doi: 10.1016/S1353-8020(11)70042-6. Review.
8. Testa CM. Key issues in essential tremor genetics research: Where are we now and how can we move forward? *Tremor Other Hyperkinet Mov (N Y)*. 2013;3. pii:tre-03-105-1843-1. doi: 10.7916/D8Q23Z0Z.
9. Zeuner KE, Deuschl G. An update on tremors. *Curr Opin Neurol*. 2012Aug;25(4):475-82. doi: 10.1097/WCO.0b013e3283550c7e. Review.

Retrieved from <https://encyclopedia.pub/entry/history/show/11390>