



Essential Tremor (ET)

# Orthostatic tremor

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Orthostatic tremor is a relatively rare and typically misunderstood condition in which individuals experience marked trembling of their legs which begins immediately after they stand up. Tremor gradually increases to the point that they are unable to remain standing for more than 10-20 seconds at a time before needing to sit down or lean against a wall for support. Despite the strong feeling of shakiness which is felt by the patient (hence the term “shaky legs syndrome”) there is little or no obvious tremor to be seen. Remarkably, the tremor disappears as soon as the affected individual begins to walk and is also absent when he or she is seated or lying down.

For these reasons, the diagnosis is usually missed by general physicians as well as neurologists. If the patient remains standing, tremors become more obvious, begin to involve the trunk and spinal muscles, and cause the patient to feel he is at risk for falling although falls are relatively uncommon in this condition.

The diagnosis can be made if the physician simply places his hand on the patient’s legs while they are standing and feels the trembling of leg muscles. If muscle activity is recorded by surface electrodes connected to an electromyography (EMG) machine, an unusually high frequency pattern of muscle tremor can be identified in the range of 14-18 Hz cycles/second). Interestingly, simply being vertical is not enough to bring on the tremor since it is absent while walking or if the affected individual is suspended by a harness with his feet off the floor.

Orthostatic tremor therefore appears to be a special type of postural tremor, which is activated by weight bearing. However, its relationship to more common but much lower frequency postural tremors such as essential tremor is uncertain.

Most patients with orthostatic tremor do not have tremor of the hands, head, or voice and the family history is negative. Unlike essential tremor, propranolol (Inderal®), primidone (Mysoline®), and alcohol are ineffective for orthostatic tremor. On the other hand, clonazepam (Klonopin®) is remarkably effective in relatively low doses and is considered the treatment of choice for this condition. Recently gabapentin (Neurontin®) has also been shown to be effective in a controlled study and, if necessary, may be given in combination with clonazepam to achieve maximal therapeutic response.

The cause of orthostatic tremor is unknown. It affects men and women equally, usually in middle to late life. Unsteady gait and fear of falling is a common problem in elderly individuals. Orthostatic tremor is therefore a rare but potentially treatable cause of unsteadiness, which is very important to identify and treat in this patient population.



#### Our Mission:

The IETF funds research to find the cause of essential tremor (ET) that leads to treatments and a cure, increases awareness, and provides educational materials, tools, and support for healthcare providers, the public, and those affected by ET.