

# Essential Tremor

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Essential tremor is when you have uncontrolled shaking movements in parts of your body - most commonly the arms and hands. It is more common with increasing age. It tends to occur in families. It is mild in some people but can become severe and disruptive to daily activities in others. There is good treatment available in the form of medication and occasionally surgery.

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## What is tremor?

A tremor is a repetitive movement of a part of the body. It is involuntary. This means that it is generally not controllable and happens without you deciding to move that body part. It is often felt as a trembling or shaking sensation.

A slight tremor is present in all people. That is called physiological tremor. It may not be noticeable. Certain things will make a physiological tremor more noticeable such as caffeine (in coffee, tea and cola), anxiety or tiredness.

## What is essential tremor?

Essential tremor is also called familial essential tremor. It is different from physiological tremor described above. It usually starts in the hands and arms. It can sometimes become quite severe so that everyday activities like holding a cup can be difficult. The tremor is usually not there at rest but becomes noticeable when the affected body part is held in a position, or with movement.

The term 'essential' means that there is no associated disease that causes the tremor.

## What causes essential tremor?

Essential tremor is known to be a familial condition, meaning that it runs in families. At least 5-7 out of 10 people with essential tremor have other members of the family with the same condition. Genes are passed on to a child from each parent and determine what we look like, how our body functions and even what diseases we get. Particular genes have been shown to have certain changes present in families with essential tremor.

It is not clearly understood how this genetic change leads to essential tremor. However, it is likely that it somehow affects some parts of the brain that are responsible for controlling movement.

## Who has essential tremor?

Studies have shown different rates of essential tremor. Some have shown it to be present in 3 in 1,000 people, whereas other studies have shown it may affect as many as 5 in 100 people. It is equally common in men and women and is more common with increasing age. Most people who develop essential tremor are aged over 35, but it can occur in younger people.

## What are the symptoms?

The only symptom in essential tremor is tremor. If you have other symptoms, then you may have a different condition. (For example, tremor can be a symptom of various conditions such as Parkinson's disease. In these other conditions, tremor is just one of several other symptoms.)

In essential tremor, the tremor usually begins in one arm or hand. Within 1-2 years, the other arm is likely to be affected. Very occasionally, it may also spread to involve the legs. Three in ten people with essential tremor have a tremor of the head. The voice, jaw or face may also be involved.

At first, the tremor may not be present all the time. Eventually it will be present all the time when the affected body part is held in a position or with certain movements. It may be worse with stress, tiredness, hunger or certain emotions such as anger. Extremes in temperature may also make the tremor more severe.

You may be able to control the tremor to an extent. It may be less noticeable when you are working with the affected body part. For example, when you use your hand the tremor may ease off. It is not present when you are resting or sleeping.

Up to 7 in 10 people with essential tremor find that the tremor reduces after drinking some alcohol.

## How is essential tremor diagnosed?

There is no test to diagnose essential tremor. Your doctor can usually diagnose essential tremor based on your explanation of the tremor and an examination. It is important for the doctor to make sure that there are no other conditions present that are causing tremor. In some cases, this may mean that you need to have some tests to rule out other conditions. For example, blood tests or a brain scan. You may also be referred to a neurologist (a doctor with a special interest and expertise in the brain and nerves).

Other conditions that can cause tremor and need to be ruled out include: a side-effect from some prescribed medicines, anxiety, caffeine, some poisons, kidney and liver disease, thyroid disease, Parkinson's disease and other movement disorders.

## What is the treatment for essential tremor?

Essential tremor cannot be cured. Treatment reduces the severity of the tremor, sometimes greatly. There are various treatments that are used.

### **No treatment is an option**

If your tremor is mild, you may not need any treatment.

### **Medication**

There are two medicines used initially for essential tremor - propranolol and primidone. These medicines have been shown to ease the tremor in up to 8 in 10 affected people.

*Propranolol* - this is a medicine that is usually used in heart disease. It is in a class of medicines called beta-blockers. It has also been shown to be effective in essential tremor. This medicine should be used with care if you have a heart conduction problem or a lung disease such as asthma. The most common side-effects with propranolol are dizziness, tiredness and nausea (feeling sick).

*Primidone* - this is a medicine that is primarily used for epilepsy, but it also works very well in essential tremor. The most common side-effects are sleepiness, dizziness and nausea. These may improve if you continue to take this medicine.

When the diagnosis of essential tremor is made, you may be offered one of these medicines. A low dose is usually started at first, and gradually increased until your tremor is eased. If you reach the maximum dose without a satisfactory improvement, then the other medicine can be tried. If that also doesn't work, you can try them together. Other medicines can be tried if these two are not effective. A wide range of medicines have been shown to have some effect on reducing the severity of the tremor.

### **Surgery**

If medicine treatment is not effective, and the tremor is severe, then a surgical procedure may be an option. There are two main surgical procedures that may be considered - thalamotomy and thalamic deep brain stimulation. They both involve the thalamus. This is a deep part of the brain that organises messages travelling between the body and brain.

*Thalamotomy* - in this procedure, the thalamus on one side of the brain is destroyed. It has been shown to be very effective. It stops or greatly reduces the tremor in up to 9 out of 10 people with essential tremor. There are risks involved such as a bleed into the brain. Potential side-effects include muscle weakness, speech problems and memory loss. If the thalamus on both sides of the brain is destroyed, there is a higher chance of side-effects. This is not usually recommended.

*Thalamic deep brain stimulation* - this procedure involves placing an electrode (fine wire) into the thalamus on one or both sides of the brain. The electrode is connected to a device called a stimulator. The electrode and stimulator stay in the body. (The stimulator is placed under the skin at the top of the chest.) The simulator sends electrical impulses down the electrode to the thalamus. It is not known exactly why this device works. It seems to interrupt or block the nerve signals coming through the thalamus that cause the tremor. If you have this procedure, you will need to have regular reviews to make sure that the stimulator setting is correct. This aims to minimise side-effects and maximise benefit. It may produce a good response in up to 9 out of 10 affected people. Again, there is a small risk that the procedure may cause a bleed into the brain. Side-effects include loss of sensation, speech problems and weakness. These usually resolve when the stimulator settings are adjusted.

### **Botulinum toxin injections (Botox®)**

There is some evidence that Botox® injections are helpful in reducing certain tremors. Unfortunately, a Botox® injection into the arm also produces weakness of the arm. This is usually not tolerated. It is mainly useful when essential tremor affects the head and neck.

### **Alcohol**

Many people find that alcohol is helpful in reducing their tremor. It needs to be used with caution to avoid developing an alcohol problem. It is not advisable to drink more than the normal recommended amount of alcohol. That is: men should drink no more than 21 units of alcohol per week, no more than four units in any one day, and have at least two alcohol-free days a week. Women should drink no more than 14 units of alcohol per week, no more than three units in any one day, and have at least two alcohol-free days a week. Pregnant women, and women trying to become pregnant, should not drink alcohol at all. One unit is in about half a pint of normal strength beer, or two thirds of a small glass of wine, or one small pub measure of spirits.

### **Intermittent treatment**

Some people with essential tremor only wish to have treatment for specific times. For example, prior to going to a social engagement or before a particularly important meeting. In these situations a single dose of propranolol or an alcoholic drink may ease the tremor satisfactorily for the occasion.

## **What is the outlook?**

Essential tremor is called a progressive disease. This means that it tends to get worse over time. It does not shorten expected lifespan and does not lead on to any more serious brain disorders. Some people have a mild tremor which does not affect daily life very much. If your tremor is more severe, it may significantly disrupt your ability to carry out normal activities such as drinking from a cup.

However, treatments work well to ease the severity of the tremor in most people with essential tremor.

## **For further information and support**

### **National Tremor Foundation**

Long Term Conditions Centre, Gubbins Lane, Harold Wood, Essex RM3 0AR  
Tel: 01708 386399 Web: [www.tremor.org.uk](http://www.tremor.org.uk)

## **Further reading & references**

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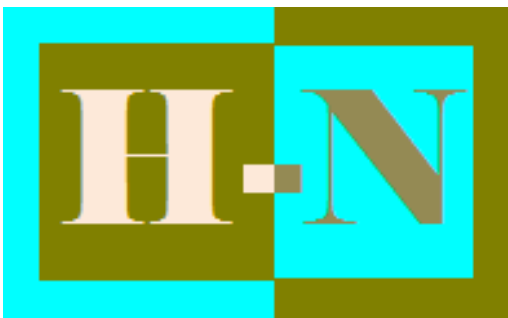
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