When the word ‘tremor’ is mentioned, the first thing that springs into most people’s mind is Parkinson’s Disease. However, there are many different forms of tremor that can affect people in very different ways. One form of tremor that is 20 times more prevalent than Parkinson’s Disease — yet is not as well known — is Essential tremor. Some reports estimate that Essential Tremor can affect up to 4% of people age 40 years and over, and up to 14% of people over 65 years. Statistics like these have led to the belief that Essential Tremor may be the most common form of neurological disorder amongst older individuals.

Essential Tremor is a movement disorder that affects the hands and arms, and in some circumstances the legs, head and voice. Although it is characterised by shakiness in general, there are two major types of tremor that may be caused by this disorder. The first is the most common movement problem for people with Essential Tremor: action tremor. This tremor is obvious when performing meaningful actions, such as using a knife and fork, holding a cup of coffee, or bringing a cup of coffee up to your mouth. The ripples in the coffee come from hand tremor, so the more severe the tremor, the larger the ripples. In some cases, the sufferer of Essential Tremor may not even be able to hold their hand steady enough to drink from the cup. The other prevalent form of tremor is postural tremor. This tremor occurs when you try and hold a limb against gravity — like holding your hand out in front of you and trying to remain as still as possible. Even though you’re trying not to move your hand, there might still be a lot of shaking than cannot be controlled. About 95% of individuals with Essential Tremor will exhibit clinical signs of action tremor that are more severe than postural tremor, and in some cases, the patient may not even show an enhanced postural tremor.

Although the cause of tremor is still unknown, there are several neural pathways in the brain that have been implicated in the disorder (i.e. pathways connecting the cerebellum, thalamus, brainstem, and motor cortices). These pathways tend to be very important when performing task that involve manual dexterity or precise movements. So when changes in the central nervous system occur due to Essential Tremor, there will be problems with controlling body movement. Two of the biggest risk factors for developing Essential Tremor are advancing age and a family history. The specific genes involved with the disorder have not yet been identified, but there are reasons to believe that genetics play a significant role the development of the disorder. In 50-70% of cases, there is a family history of Essential Tremor, with a lower age of onset associated with family history. It is also interesting that for monozygotic twins, if one twin shows traits of Essential Tremor, the other twin will exhibit Essential Tremor in 60-90% of cases. Given that these twins share nearly identical genetics, there appears to be a genetic link for developing the disorder. However, because there is
not 100% accordance between genetics and the disorder, it is very possible that environmental factors also contribute to the disorder.

Because very little is known about the origins of Essential Tremor, there has not been a cure discovered for it. Although it is not a life-threatening disorder, it can be frustrating for the person who has it, and it tends to get worse over time. Therefore, managing the disorder is a big priority. Given that factors such as anxiety, stress, caffeine intake, and sleep deprivation can worsen the symptoms, people are usually encouraged to organise their lifestyle to minimise these factors. Regardless, most Essential Tremor suffers will be prescribed medications such as Propranolol or Primidone, which can reduce tremors by up to 50% in users\textsuperscript{9,10}. A feature of Essential Tremor is that it is a unique movement disorder where symptoms can be relieved with small amounts of alcohol. However this is not recommended as a viable treatment option as it could lead to dependence. In the worse cases of Essential Tremor, where all treatment options have been exhausted, suffers may undergo surgical procedures. In particular, deep brain stimulation may be used as a treatment to improve function and quality of life\textsuperscript{10}. Deep brain stimulation involves inserting a neurostimulator (pacemaker) into parts of the brain that generate electrical signals that cause movement. If these movement pathways have problems communicating with one another, such as in Essential Tremor, the neurostimulator can help with balancing activity in the pathways to restore normal function.

There are many excellent resources available to assist individuals with Essential Tremor and also to help friends and family understand more about the disorder. Aside from the Brain Foundation website, a large amount of online information is available from the International Essential Tremor Foundation.

References