

## **“Many people, including physicians, believe, incorrectly, that the Tremor is the most debilitating symptom of Parkinson’s Disease.”**

Tremor is a common problem in Parkinson’s disease (PD) and many people, including physicians, believe, incorrectly, that it is the most debilitating symptom of the disorder. For the non-specialist, the absence of tremor often slows down the recognition and diagnosis.

The tremor of PD is different than most other tremors because it is a “resting tremor,” also called a “tremor at rest.” It occurs when the limb is at rest and goes away with movement. It often returns when the limb is kept in a fixed posture (called “postural tremor”) as when holding a spoon to the lips. Tremors of all types get worse when the patient is nervous or excited. Some patients report that tremors worsen in the cold. Some report worsening after some exercising, such as lifting weights, whereas others report improvement after bicycling. Tremors are usually, but not always asymmetric, affecting one side more than the other. It is common for tremor to only affect one side, and never, even after many years, affect the other. And it may affect an arm on one side and the foot on the other. The severity of the tremor, even untreated, usually varies during the day, sometimes going away for hours at a time, particularly when engaged, or relaxed. The fingers and hands are most commonly affected, followed by the jaw, the legs or feet and the tongue. Although the voice is often affected in PD, it does not develop a tremor. Head tremor, as affected Kathryn Hepburn and

Ronald Reagan, also does not occur as part of PD. Head tremor generally indicates that the patient also has essential tremor, a different condition, which some authorities believe occurs more frequently in PD.

Tremors go away during deep sleep, so you can usually tell if a PD patient with tremor is sleeping soundly, however, during the light stages of sleep, the tremor may reappear, and awaken the patient. Tremors also may prevent the patient from falling asleep.

It is important to know that how well a patient responds to PD medication is very unpredictable. In most cases, L-Dopa, our best drug, improves tremor shortly after it is started, but sometimes the tremor is completely unaffected. This often leads to disappointment and patients with bothersome tremor will often return for their appointment reporting that their PD medication hasn’t been helpful. Usually, when questioned, they will admit that they move more easily, are more dexterous, and are less slow, but their focus had been on the tremor, with the other PD problems less bothersome. Sometimes other, generally less helpful PD medications such as amantadine and the anticholinergic drugs like benztropine and trihexiphenidyl, may improve tremor more than L-Dopa or dopamine agonists, and might be considered. Unfortunately, these drugs tend to have a higher risk of side effects. In

cases of severe tremor that does not respond to the standard PD medications, clozapine, an antipsychotic drug, may be useful, although it requires frequent blood testing, or brain surgery, in the form of deep brain stimulation or focused ultrasound, which are both extremely effective.

Unlike all other symptoms of PD, tremor does not always get worse with time. If a tremor affects one hand, it may not ever involve the other. If the tremor is severe in the first year or two, it does not mean that it will be incredibly severe in future years. In fact, some PD patients will experience a slow improvement in their

tremor over many years, even without a change in medications.

Some patients have severe tremor as their main presenting problem. This syndrome is called “tremor predominant PD,” for obvious reasons, and carries a mixed prognosis. Generally these patients have a better long term prognosis, with longer lifespan, fewer problems with memory, depression and falls, but their tremors are usually much more difficult to control.

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