

**American Academy of Neurology  
Movement Disorders Section  
Resident Core Curriculum**

6/15/01

The specialty of movement disorder neurology focuses on a number of neurological disorders of motor control. Movement disorders are classified first phenomenologically and then etiologically. In terms of phenomenology, hypokinetic movement disorders include Parkinson's disease and other parkinsonian syndromes. The hyperkinetic movement disorders are divided into the following categories; tremor, chorea, dystonia, tics, stereotypies and myoclonus. The ataxias and other gait disorders may also fall into this specialty. Finally, dyspraxias that affect the successful execution of movements involved in complex tasks or movement patterns may also be aspects of movement disorders. The etiologic classification of disorders includes neurodegenerative, genetic, infectious, metabolic, nutritional, toxicological and vascular. As such, movement disorders may be considered primary when they occur as an isolated neurologic syndrome or secondary when they occur as a part of a larger process of known cause. Importantly, because many movement disorders are drug-induced and iatrogenic in etiology, residents should be particularly aware of the agents that are associated with their induction. In addition to the clinical phenomenology and etiology, other aspects encompass this specialty including neuroepidemiology, molecular biology, neurochemistry, neuropharmacology, neurophysiology, neurorehabilitation, neurosurgery, and neuroimaging.

The general goals of a residency program would include several aspects. The residents should be familiar with the definition of the clinical phenomenology such as parkinsonism, tremors, chorea, dystonia, tics, stereotypies and myoclonus as well as having a knowledge of the differential diagnoses. The resident should be able to perform a detailed neurological examination which will allow them to differentiate the phenomenology and separate disorders into primary and secondary ones. They should have a familiarity with several specific clinical syndromes including Parkinson's disease and other parkinsonian syndromes (specifically progressive supranuclear palsy, multiple system atrophy, corticobasoganglionic degeneration), Huntington's disease, Tourette's syndrome, idiopathic dystonia of both adult and childhood onset, essential tremor, Wilson's disease, tardive dyskinesia, and restless leg syndrome. There should be a basic knowledge of the anatomy of the basal ganglia and how it relates to certain disorders. Residents should also be able to recognize the pathology, genetic patterns and imaging abnormalities in the above-noted disorders.

Therapeutics have expanded dramatically in the field of movement disorders. Residents should be familiar with both medical and surgical modalities which are currently available. Specifically, the residents should have a knowledge of the therapeutic measures for Parkinson's disease including pharmacological agents such as levodopa, dopamine agonists, COMT inhibitors, MAO inhibitors, anticholinergic agents, Amantadine and atypical antipsychotics. They should have an understanding of the

indications and contraindications for neurosurgical intervention. They should also be able to develop treatment plans and understand the pharmacology of the many hyperkinetic disorders. Botulinum toxin plays a significant role in the treatment of movement disorders and residents should know what the appropriate applications are.