



Parkinson's Disease

VA Research has six Centers of Excellence focused on Parkinson's disease, based in Houston, Philadelphia, Portland, Richmond, San Francisco, and Los Angeles. Researchers at these sites are studying the biochemical pathways involving dopamine—a brain chemical implicated in Parkinson's disease—and testing a variety of treatment approaches, including medication, surgery, and electrical stimulation.



Examples of VA Research Advances

VA-NIH trial backs brain implants for some patients – Deep brain stimulation—a treatment in which a pacemaker-like device sends pulses to electrodes implanted in the brain—is riskier than drug therapy but may hold significant benefits for those with Parkinson's disease who no longer respond well to medication alone, reported researchers with VA and the National Institutes of Health who conducted a six-year study comparing deep brain stimulation with “best medical therapy.” The trial, the largest of its kind to date, included 255 patients at seven VA and six university sites. Significantly, the trial included patients ranging in age from 37 to 83 and found that older patients—a group typically excluded from brain stimulation research and treatment—benefited as much as younger patients from the treatment.

Generating dopamine neurons – Researchers within VA and elsewhere are exploring ways to replenish brain cells that make dopamine. A loss of these cells is one of the hallmarks of Parkinson's. A VA team in San Francisco has discovered that a protein called beta-catenin plays a key role in transforming precursor cells in the brain into dopamine neurons. The finding may lead to new strategies to boost the effectiveness of therapies that introduce stem cells or other precursor cells into the brain.

Videophones useful in Parkinson's care – A study at the Houston VA found a high rate of satisfaction among patients with Parkinson's and their providers—including expert neuroscience nurses—who communicated by videophone for follow-up care.

Facts About Parkinson's Disease

Parkinson's disease is a disorder of the central nervous system resulting in rigidity of the muscles, delayed movement, poor balance, and tremors. It affects as many as 1.5 million Americans, mostly people over age 50. Some 50,000 new cases are diagnosed annually. VA treats at least 40,000 Veterans with this debilitating disorder each year. Parkinson's patients have a progressive loss of the brain chemical dopamine, caused by the death of dopamine-producing nerve cells. Experts suspect that a combination of genetic and environmental factors is responsible for this loss.

