VA Research Advancements

Parkinson's Disease

VA Research has six Centers of Excellence focused on Parkinson's disease. These Research, Education, and Clinical Centers are based in Houston, Philadelphia, Portland, Richmond (Va.), San Francisco, and Los Angeles. Researchers at these sites are studying the biochemical pathways involving dopamine and testing pharmaceutical, surgical, and electrical-stimulation treatments.

Examples of VA research advances

- Deep-brain stimulation being tested —VA is co-leading a clinical trial comparing drug therapy with deep-brain stimulation. In deep-brain stimulation, thin wires are implanted in the brain and electrical pulses are delivered from a pacemaker-like device to the areas of the brain where tremors originate. The procedure dramatically improves movement symptoms for some patients.

- Sleep trouble in Parkinson's is tied to specific brain cells—The sleep abnormalities seen in many people with Parkinson's disease—sleep attacks during the day and poor sleep at night—may be due to a lack of brain cells that make a chemical called hypocretin, according to research by a team with VA and the University of California, Los Angeles.

- Stem cells may replace depleted brain cells—VA researchers in Richmond are exploring the use of adult stem cells that, when transplanted into the brain, may transform into dopamine-producing neurons to help combat Parkinson's disease.

Facts About Parkinson's Disease

Parkinson's disease (PD) 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. PD patients have a progressive loss of the brain chemical dopamine, caused by the death of nerve cells. Experts suspect that a combination of genetic and environmental factors are responsible for this loss.

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