

The Latest in Parkinson's Disease Treatments

Parkinson's Disease (PD) is a degenerative neurological movement disorder affecting nearly 1 million people in the U.S. While its cause is unclear, treatments can be highly effective. Research advancements open the door for innovative approaches that treat PD in new ways. The goal of all PD treatments is to minimize symptoms, slow disease progression, and help patients live full and active lives.

What's the first line of treatment for Parkinson's?

The symptoms of Parkinson's (primarily tremors and limb rigidity) result from inadequate dopamine production in the brain. The primary treatment is medications that replace the dopamine the brain is lacking.

The goal is to personalize medication combinations and dosages in order to achieve symptom control and to minimize their side effects. "We titrate the medication (continuously measure and adjust) to find the best match and dosing to replace the dopamine for each patient," says Corneliu Luca, M.D., Ph.D., a neurologist with the University of Miami Health System who specializes in treating PD. "The challenge is establishing the proper balance."

Is surgery effective for Parkinson's?

Deep Brain Stimulation (DBS) and focused ultrasound are "life-changing" treatments

for those with PD, says Dr. Luca.

“We implant very thin wires that connect the brain to a stimulator device implanted under the skin in the chest (similar to a pacemaker for the heart).”

DBS sends electronic signals to an area in the brain that controls movement and blocks some of the brain’s messages that cause annoying and disabling motor symptoms. Patients with this implant can interrupt the abnormal brain signals that cause tremors by switching on the stimulator with a handheld control, calming symptoms almost immediately.

PD patients see the best results from DBS after the system has been fine-tuned for their needs. The doctor can routinely adjust the device so that it targets and controls a patient’s symptoms while minimizing side effects.



“DBS can greatly improve patients’ quality of life and decrease their need for PD medications significantly,” Dr. Luca says. “As this disease advances, some patients can end up taking 20 pills a day while still experiencing some disease symptoms and medication side effects.”

These side effects may include sleepiness, nausea, hallucinations, confusion/other thinking problems, lightheadedness upon standing, and behavioral/personality changes.

“Following DBS treatment, some patients get off the medication entirely.”

Learn more about the success of more than 1,100 deep brain stimulation procedures conducted at UHealth.

Supplemental therapies

While many patients respond well to pharmaceutical and/or surgical treatment for PD, some symptoms may persist.

The University of Miami Miller School of Medicine is one of 33 designated medical centers in the U.S. with a specialized, multi-disciplinary Parkinson's care team prepared to treat all aspects of this disease.

"We can help treat dystonia (muscle cramping and abnormal posture) and sialorrhea (drooling) with botulinum toxin injections (Botox®)," Dr. Luca says.

Many patients benefit from physical therapy to improve mobility issues and promote proper swallowing to prevent choking. Occupational therapy for PD focuses on teaching patients to independently manage activities of daily living and simple tasks like safely transferring in and out of a chair and using tools (like food utensils).

Speech therapy, called LSVT LOUD, can help PD patients increase the volume of their speech through improved vocal motor control.

"For patients with limited mobility or trouble traveling to our Miami office, we have expanded telemedicine," Dr. Luca says. "With video consultations, we can provide physical and speech therapies and evaluate patients' cognitive abilities."

Physical exercise can also improve balance, mobility, and strength in PD patients. UHealth's Coral Gables campus offers classes in Tai Chi, yoga, and power training (weight lifting) for PD patients.

The same UHealth location also hosts music therapy (piano) for those with PD to engage the brain, reduce stress, and lift the mood.

“PD patients tend to have related psychological issues, like anxiety and depression,” says Dr. Luca. “They can benefit from behavioral treatments and psychological support services, in addition to psychiatric medications.”

Participating in local and national support groups is another way for PD patients and their families to learn practical techniques to deal with physical and emotional symptoms.

“We like to inform patients about this disease and how it progresses,” Dr. Luca says. “As faculty at UM, we give talks and participate in symposia to educate the public about treatment options and research advancements. We also offer Zoom seminars, organized by our social worker, to increase public awareness of Parkinson’s Disease.

“All of these programs are designed to help patients, families, and caregivers.”

What’s next for treating Parkinson’s?

As a Parkinson’s Foundation Center of Excellence, UHealth offers patients access to clinical trials that advance knowledge about this disease and how best to treat it.

“We currently have more than 30 clinical trials actively enrolling patients. Our research trials look at different ways to improve patient mobility. Other trials are studying medications to slow disease progression for those recently diagnosed,” Dr. Luca says.

“We are also hosting trials exploring options for longer-lasting relief compared to classic medications that are effective for four to five hours. We aim to extend this

effectiveness to six hours or more.”

UM’s surgical clinical trials test new Deep Brain Stimulation devices to improve symptoms when medications don’t provide long-lasting relief.

“We are advancing the technology of DBS. Just recently, we adopted new technology to adjust patients’ device programming remotely,” Dr. Luca says. “This enables us to check the DBS device and adjust the intensity of the stimulation remotely while the patient stays home.”

The future of Parkinson’s Disease research is exploring genetic factors. “We’re very interested in studying Hispanic PD patients because they have not really been studied,” Dr. Luca says. “Most research studies historically have looked only at white patients. We want to expand the research to include our local South Florida population.”

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