



HOAG MEMORIAL HOSPITAL PRESBYTERIAN  
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## **Hoag Implants First Deep Brain Stimulation with BrainSense Technology for Parkinson's Disease in California**

*Innovative Technology allows for more personalized and data-driven therapy*

**NEWPORT BEACH, CALIF., July 20, 2020** --- Hoag Memorial Hospital Presbyterian recently became the first hospital in California to implant the Food and Drug Administration's (FDA) recently approved Percept™ PC Deep Brain Stimulation (DBS) system in a patient for [Parkinson's disease](#). This DBS system detects patient-specific brain signals and provides instant feedback to optimize real-time therapy for patients with movement disorders.

[Christopher Duma, M.D., F.A.C.S., medical director of the Brain Tumor Program at Hoag's Pickup Family Neurosciences Institute](#), implanted the Percept PC neurostimulator with BrainSense™ technology from Medtronic into the brain of a patient on July 13, 2020. This newest evolution of the technology allows physicians to continuously record patient brain signals and correlate these with patient-recorded experiences, such as symptom onset and fluctuation, medication intake and side effects. This provides much more personalized, data-driven neurostimulation management for patients with neurologic disorders such as Parkinson's disease, essential tremor and even epilepsy.

Shortly after [DBS](#) was approved by the FDA in 1997, the Pickup Family Neurosciences Institute's Movement Disorders Program became one of the first in the country to adopt this advanced therapy for Parkinson's disease, which uses a small pacemaker-like device that sends radio wave signals to a targeted area in the brain. Since then, Dr. Duma has implanted DBS in more than 800 patients, making the Institute's Movement Disorders Program a leader in the field of Parkinson's disease therapy. The program's innovative approach, combined with Dr. Duma's longstanding experience with some of the highest annual volumes in Southern California, puts the Institute's Movement Disorders Program at the forefront of cutting-edge medicine.

"The Percept BrainSense is a game changer for neuromodulation. We can now tailor therapy to each patient's needs based on direct feedback from brain activity," Dr. Duma said. "This is yet another great example of Hoag's commitment to leading the advances in patient care."



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In addition to offering minimally invasive surgical treatment for Parkinson’s disease, the Movement Disorders Program specializes in patient evaluation, advanced medical therapy, [clinical trials](#), and community support groups throughout Orange County. The multidisciplinary movement disorders team of specialists takes a comprehensive approach to care, meeting regularly to discuss the best treatment options available for each patient. As the mission statement of the Pickup Family Neurosciences Institute states: Compassionate care, clinical excellence, and creative intelligence.

“We are excited to be one of the first to use this innovative DBS system to help treat patients with Parkinson’s disease,” said [Sandeep Thakkar, D.O., movement disorders neurologist](#). “This new personalized therapy is the result of a research collaboration between our movement disorders program and Medtronic to bring practical and clinical insights to product development. The Percept BrainSense has transformed the standard of care for patients with Parkinson’s disease while greatly improving their quality of life. Our ability to monitor the patient’s brain activities in real time can reduce the number of visits to the clinic — especially welcome during this pandemic.”

## **ABOUT PICKUP FAMILY NEUROSCIENCES INSTITUTE**

Compassionate Care, Clinical Excellence, and Creative Intelligence.

Delivering a personalized, integrated approach using best-practice guidelines, the most advanced technology, and integration of medical specialists in the most appropriate facilities, the [Pickup Family Neurosciences Institute \(PFNI\) at Hoag](#) provides world class care for patients with specific conditions of the brain and spine such as stroke, aneurysms and vascular malformations, brain tumors, epilepsy, movement disorders, memory and cognitive disorders, pain, minimally invasive spine surgery, multiple sclerosis, addiction medicine and sleep disorders, as well as the mind-body interface of behavioral health. Many of Hoag’s PFNI programs have received high acclaim, including the stroke program, which was the first in Orange County and the second in California to be named a Certified Comprehensive Stroke Center by DNV GL Healthcare. It was awarded the American Stroke Association’s Get With The Guidelines Stroke Gold Plus Performance Achievement for stroke care. And as one of the first centers in the U.S. to offer the most advanced radiosurgical treatment system available, Leksell Gamma Knife® Perfexion™, the PFNI brain tumor program is the largest in Orange County and is also among the top volume programs in the western United States. Hoag has been recognized as a designated Level 4 Comprehensive Epilepsy Center by the National Association of Epilepsy Centers. The PFNI’s memory and cognitive disorders program is nationally recognized.

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Hoag is a nonprofit, regional health care delivery network in Orange County, California, that treats more than 30,000 inpatients and 480,000 outpatients annually. Hoag consists of two acute-care hospitals – Hoag Hospital Newport Beach, which opened in 1952, and Hoag Hospital Irvine, which opened in 2010 – in addition to nine health centers and 13 urgent care centers. Hoag has invested \$261 million in programs and services to support the underserved community within the past five years, including areas like mental health, homelessness, transportation for seniors, education, and support for single mothers. Hoag is a designated Magnet<sup>®</sup> hospital by the American Nurses Credentialing Center (ANCC). Hoag offers a comprehensive blend of health care services that includes five institutes providing specialized services in the following areas: [cancer](#), [heart and vascular](#), [neurosciences](#), [women's health](#), and orthopedics through Hoag's affiliate, [Hoag Orthopedic Institute](#), which consists of an orthopedic hospital and four ambulatory surgical centers. Hoag has been named one of the Best Regional Hospitals in the 2019 - 2020 *U.S. News & World Report*. For an unprecedented 23 years, residents of Orange County have chosen Hoag as one of the county's best hospitals in a local newspaper survey. Visit [www.hoag.org](http://www.hoag.org) for more information.

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