

Back In Action: NewYork-Presbyterian Advances Minimally Invasive Spine Treatment

Millions of people suffer from back and neck pain, with ailments ranging from minor annoyances to major debilitating conditions. At the Spine Centers of NewYork-Presbyterian Hospital, we take a comprehensive approach to the management of spinal disorders, offering both surgical and non-surgical treatment options to provide the most appropriate plan of care for each patient.

When non-operative treatments have been unsuccessful and surgery is the recommended treatment, our experienced neurosurgeons utilize minimally invasive approaches whenever possible. Our multidisciplinary team includes neurosurgeons, neurologists, physiatrists, pain management specialists, physical therapists, and nurses. These specialists collaborate to provide personalized and individualized care, with a shared goal of helping patients regain function and get back to their daily activities.

Patients who are candidates for minimally invasive spine surgery benefit from smaller incisions and scars, a shorter hospital stay, fewer postoperative infections and complications, and a quicker recovery. By entering the spine through small incisions, the surgeon can repair injured discs, treat compression fractures, insert instrumentation, and perform spinal fusion between affected vertebrae. Our surgeons use computer navigation, through state-of-the-art computer-controlled imaging systems, to locate the specific parts of the spine involved, enabling them to insert screws or other devices in precisely the correct location and ensuring an optimal recovery for each patient. NewYork-Presbyterian also offers an educational course on minimally invasive spine surgery for surgeons.

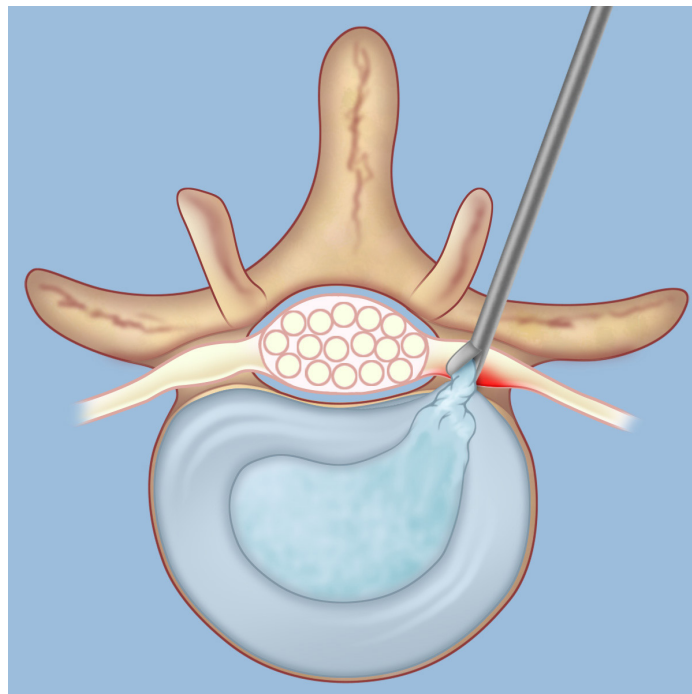
We treat patients with the following spinal disorders:

Spinal disc degeneration/herniation:

Patients with disc degeneration or herniation may be offered surgery when physical therapy and other nonsurgical approaches, such as epidural steroid injections and nerve blocks, are not sufficiently effective to relieve symptoms and restore function. Therapeutic procedures include minimally invasive microdiscectomy to resect the herniated portions compressing the exiting spinal nerve; spinal fusion to limit pain and instability; or, in some cases, artificial disc implantation. Degenerative changes in the cervical spine may be managed by decompressing neural elements and stabilizing the cervical spine, when necessary.

Spinal stenosis: Lumbar spinal stenosis can be treated under local anesthesia using minimally invasive decompression. In some cases, a small implant can be inserted between the two vertebrae compressing the nerves.

Vertebral fractures: Fractures, such as those caused by osteoporosis, trauma, or spinal tumors, are treated utilizing vertebral augmentation techniques. With vertebroplasty, bone cement is inserted percutaneously into



LUMBAR MICRODISCECTOMY FOR A HERNIATED DISC

a fractured vertebra, providing stability as it hardens. With balloon kyphoplasty, the surgeon inserts a balloon into a fractured vertebra, inflates it and then removes it, and fills the space with bone cement.

Scoliosis: Patients with scoliosis may undergo surgery to correct the curvature, restoring form and function.

Spinal trauma: NewYork-Presbyterian's neurocritical care and neurosurgery teams work quickly to stabilize patients with spinal injuries to avoid further trauma. Rehabilitation is initiated within days of stabilization whenever possible.

Spinal tumors: Primary and metastatic spinal tumors require a multidisciplinary approach such as that used at NewYork-Presbyterian Hospital, com-

Comprehensive surgical and nonsurgical therapies for the full range of spinal disorders

Superior Spinal Care continued from front

binning surgery, chemotherapy, and/or radiation therapy as indicated. Our surgeons may use spinal stabilization techniques to manage metastatic spinal tumors to preserve neural function and improve patients' quality of life.

When surgery on or near the spinal cord is required, NewYork-Presbyterian neurosurgeons make the procedure as safe and effective as possible. They employ neurophysiological monitoring of spinal function during surgery while using microscopic stereotactic equipment to ensure precision. Patients whose conditions were considered inoperable by other centers can often be treated by our neurosurgeons.

Rehabilitation and Recovery

NewYork-Presbyterian's multidisciplinary rehabilitation team offers comprehensive spinal rehabilitation programs.

Physiatrists can prescribe physical therapy that can be provided at NewYork-Presbyterian or closer to a patient's home.

A Commitment to Research

Many of the treatments used today to treat spine disorders were developed as a result of clinical research in which NewYork-Presbyterian investigators participated. Today our spine specialists participate in clinical outcome studies of different minimally invasive surgical approaches, and contribute data to the National Neurosurgery Quality and Outcomes Database. This outcomes registry provides an infrastructure for tracking, analyzing, reporting, and improving neurosurgical care. NewYork-Presbyterian investigators are also conducting clinical trials of innovative disc replacement therapies for degenerative disc disease.

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THE #1 HOSPITAL IN NEW YORK. 12 YEARS RUNNING. NewYork-Presbyterian Hospital is one of the foremost academic medical centers in the world, with leading specialists in every field of medicine and a staff dedicated to the care of its patients. The Hospital enjoys a unique affiliation with two of the nation's leading Ivy League medical schools: Columbia University College of Physicians and Surgeons and Weill Cornell Medical College. With its academic partners, the Hospital shares a commitment to pursuing clinical excellence, engaging in groundbreaking biomedical research, offering outstanding medical education, and providing prevention and wellness services to the community.