



MedStar Georgetown
University Hospital

MedStar Georgetown University Hospital is a not-for-profit, acute-care teaching and research hospital with 609 beds located in Northwest Washington, D.C. Founded in the Jesuit principle of *cura personalis*—caring for the whole person—MedStar Georgetown is committed to offering a variety of innovative diagnostic and treatment options within a trusting and compassionate environment.

MedStar Georgetown's centers of excellence include neurosciences, transplant, cancer and gastroenterology. Along with Magnet® nurses, internationally recognized physicians, advanced research and cutting-edge technologies, MedStar Georgetown's healthcare professionals have a reputation for medical excellence and leadership. MedStar Georgetown University Hospital—*Knowledge and Compassion Focused on You.*

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MedStar Georgetown
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Minimally Invasive Spine Surgery

Spine surgery is too important to go anywhere else.

Knowledge and Compassion
Focused on You

Minimally invasive spine surgery means spine surgery without fear.

Eight out of 10 Americans will experience neck or back pain during their lives. In the past, treatments for spine conditions were often as much a source of fear and pain as the conditions themselves. Minimally invasive spine surgery (MISS) has changed this forever. And in the Washington, D.C., area, the Spine Center at MedStar Georgetown University Hospital is the first choice of many facing MISS.

Imagine spine surgery with reduced pain and faster recovery times ... with small incisions and little scarring ... with fewer complications and far less blood loss or risk of infection. Imagine avoiding the need for disruptive procedures like disc fusion altogether. Thanks to advances and techniques developed in the last decade, MISS offers you all of these advantages today—delivered by one of the nation's leading neuroscience and spine programs.

At MedStar Georgetown University Hospital, our widely respected team of neurosurgeons and orthopaedic surgeons works in tandem to treat the full spectrum of spine problems. You'll have access to the most innovative techniques in MISS and, when needed, traditional spine surgery. Our expert, fellowship-trained surgeons have performed thousands of MISS procedures. They use MISS to treat more types of spine problems than any other hospital in the area. And with shorter recovery times, you can return to your regular everyday activities faster.

“The pain is gone!”

Rosanne Shepler

A large cyst was pressing on a nerve in Rosanne's spine. Jogging and walking were painful, and then just lying down hurt. Sleeping was becoming a dim memory. The first surgeon she called said she needed back fusion. But major back surgery seemed extreme for a cyst. She then called a physician friend who also recommended the back fusion.

Still afraid, Rosanne dug in her heels. The physician friend then referred her to a minimally invasive spine surgeon at MedStar Georgetown University Hospital, who determined she was a perfect candidate for MISS. “I am so happy I got a second opinion. My surgeon was so kind and patient. He answered all my questions.” After the procedure, “the pain was gone!” A psychotherapist, Rosanne was back on the job within a week, and today is doing 50-minute step aerobic workouts.

For a long time, Rosanne thought back fusion was the “gold standard” for treating disc slippage. But not anymore. Rosanne puts it this way: “If you have a hammer, everything can look like a nail. I had a cyst, not a disc issue.” MISS provides a new and often better option to spine fusion. Patients need to talk with a qualified MISS specialist to see if this innovative approach is the right choice for them.



Minimally invasive for maximum results

MISS is a giant step forward in spine surgery—and great news for patients. Traditional, open spine surgery typically requires a long incision, a sizeable area of exposure and significant blood loss. To fully expose the affected part of the spine, the surgeon must detach or strip away muscles and ligaments from the bone. This is a major reason for the pain and long recovery time associated with traditional spine surgery, as well as a greater risk of infection.

MISS minimizes the area affected by the surgery and preserves as much of the original spinal structure as possible.

How MISS works.

During a MISS procedure, our surgeons make a small incision (less than 2 cm) in the back, chest or abdomen. Using special tools and techniques, they move aside skin, muscles and ligaments and work through them rather than cutting them to reach the spine and perform the surgery.

To guide their work, the surgeons employ a highly sensitive advanced surgical microscope (called an endoscope) to access even the most delicate areas with precision. The endoscope includes a tiny video camera that beams the view inside the patient to a television screen in the operating room. The surgeons then use small specialized surgical instruments to complete the repair or treatment.

These techniques typically result in smaller incisions, less blood loss and less impact on

surrounding structures and tissues. Equally important, MISS often shortens recovery times and produces fewer long-term complications.

Surgery is always the last resort.

Even with all its benefits, not every patient is a candidate for MISS. We feel very strongly about this. That's why our specialists work closely with you and your family to find the most effective course of treatment. We make sure you understand the condition and all available options.

We only recommend surgery when less aggressive options have been ruled out. The level of pain is often the key. Prescribing pain medication is typically a first step, followed by physical therapy and perhaps cortisone injections.

When surgery is needed, MISS is our first consideration and now makes up 80 percent of our spine surgeries. For the remaining 20 percent, our skilled surgeons provide the complete range of traditional spine surgery, frequently enhanced by the minimally invasive techniques they know so well.

Minimize fusion surgery.

Fusion surgery has received significant publicity—and with good reason. It can be difficult and sometimes controversial due to overuse. Traditional fusion surgery usually involves removing bone and ligament structures, which can carry the risk of destabilizing the entire spine. With less disruptive strategies like MISS, specialists can avoid fusion surgery altogether in certain patients. Has fusion surgery been recommended for you? Check with one of our specialists for a second opinion.

“Minimally invasive spine surgery made me a better skier.”

Jeff Kurland

Jeff refuses to let aging slow him down. He leads an active lifestyle, and skiing is his passion. But Jeff's lower back had other ideas. Due to severe disc damage and stenosis, he was in constant pain and needed a walker to move around the house. After telling Jeff MISS was not possible for him, a neurosurgeon at another hospital recommended and performed a back fusion. Jeff felt better for a time, but nine months later the pain was back. He didn't want more major surgery, and pain management was hit or miss at best.

Then Jeff heard about the success of MISS at MedStar Georgetown University Hospital and made an appointment. “I read about minimally invasive spine surgery on the Internet and the pioneering techniques of the University of Chicago where my neurosurgeon

trained.” The choice seemed right, but there was another factor for Jeff. “I was an incredibly active person. For me, it wasn't just about ending the pain. I wanted my lifestyle back.”

The MISS took care of both his stenosis and disc, and recovery was less painful. Today, Jeff is completely pain-free. He works out at the gym and recently returned from a three-week ski trip. Jeff also discovered an added benefit. “The surgery helped with my spinal alignment, so now I am a better skier!”



MISS goes farther at MedStar Georgetown University Hospital.

Our specialists employ MISS to treat or correct the full spectrum of spine problems: *disc herniations • stenosis degenerative disc disease • spondylosis • spondylolisthesis scoliosis • rheumatoid arthritis • synovial cysts pinched nerves • bone spurs • sciatica fractures • radiculopathy • infection • tumors.*

In our expert hands, MISS is a proven technique for all of these surgical procedures:

Discectomy – removes all or part of herniated disc material pressing on the spinal cord or radiating nerves. Discs are the cushions that separate your spinal bones (vertebrae) and protect your spinal cord.

Foraminotomy – relieves the pressure on nerves leaving the spinal canal due to compression of the passageways in the spine through which they pass. Surgery widens these passageways.

Laminectomy – removes a portion of a vertebral bone called the lamina. Often performed to treat spinal stenosis (abnormal narrowing of the spinal canal), the procedure opens up the spinal canal and can take pressure off the spinal nerves or spinal cord.

Resection of synovial cyst – a synovial cyst is a fluid-filled sac that can create painful pressure inside the spinal canal. MISS can relieve this relatively uncommon condition by removing part of the cyst.

Corpectomy – removes part of the vertebral body (the largest part of a vertebra), usually to relieve pressure on the spinal cord and nerves. A corpectomy is often performed in association with some form of discectomy and is accompanied by a vertebral fusion.

Spinal fusion – permanently joins together two or more vertebrae in the spine so there is no movement between them. The surgeon uses a graft (such as bone) or instrumentation to fuse the bones together. Other surgical procedures of the spine are almost always done first before performing spinal fusion.

Spinal instrumentation – a solution to spinal instability that keeps the spine rigid (typically after spinal fusion) by surgically implanting or attaching devices such as screws, rods, hooks, braided cable, plates, or cages.

Tumor resection – removal of part of a spinal tumor using MISS techniques and tools. MISS can be used to remove both benign and malignant tumors quickly and effectively with minimal scarring and pain.

CyberKnife® radiosurgery – kills cancerous cells with radiation, even in hard-to-reach places like the spinal cord or spinal column. Not a surgical procedure, CyberKnife uses computers, cameras and robotics to concentrate radiation directly at tumor cells while limiting exposure to surrounding healthy tissue.

Vertebroplasty and kyphoplasty – relieves the pain of a fractured vertebra by placing bone cement into the fracture. In vertebroplasty, the cement is injected under pressure into the fractured vertebra. In kyphoplasty, the surgeon inflates a balloon in the fracture, then deflates and removes it. The cavity created is filled with bone cement using less pressure than needed for vertebroplasty.

“I could have jumped out of my bed and danced.”

Betty Lou Anderson

Betty Lou had seen—and felt—it all. Forty years of back pain. Nine back surgeries. Tremendous leg spasms. Struggles with walking or sitting through services at her church. A surgeon who said the pain was all in her head. Previous fusion surgery that did not relieve her pain. Physicians and physical therapists were puzzled by her leg tremors. They were unlike any they had ever seen.

Betty Lou was not improving, and the treatments were only causing more pain. Then the physical therapist suggested she call the MISS team at MedStar Georgetown University Hospital, where some of the therapist's patients had very positive results. Betty Lou made an appointment. She had MISS to treat a bilateral stenosis and herniated disc.

“After the procedure, I could have jumped out of bed and danced,” says Betty Lou. “The pain relief was that fast. On a scale with 100 as the most painful, I’m now down to a two.” Today, Betty Lou is attending her beloved church again and cheering on her grandchildren at their soccer games. “I am so grateful to the doctors for bringing these skills here. They exemplify what doctors should be.”



Six myths about minimally invasive spine surgery

There is a lot of “myth-information” out there about MISS. To understand its full potential for treating spine problems, you need to know what it is—and what it isn’t.



MYTH 1 All spine surgeries require lots of pain and long recoveries.

Reality: Not any more. MISS significantly lowers pain and shortens recovery times. Many patients go home the same day as their surgery. And because MISS can improve outcomes, it can also reduce long-term pain and complications.

MYTH 2 Many spine problems are too complicated for MISS.

Reality: Very few problems are too complicated for MISS. At MedStar Georgetown University Hospital, we consider MISS a surgical option for the entire spectrum of spine conditions. Our specialists apply it to about 80 percent of their cases—whenever they can get an equal or better result than with open surgery.

MYTH 3 Lasers are an effective, minimally invasive alternative for spine surgery.

Reality: No recognized health authority in the United States recommends laser spine surgery. Both minimally invasive and traditional spine surgeries use different techniques that have been proven effective. Lasers have not been proven effective in clinical trials for spine surgery. In some cases, they may help reduce pain by destroying (or ablating) nerve ends. Their surgical application for burning away disc tissue or bone spurs is limited, however, and there is no proof that this is a more effective approach.

MYTH 4 The best way to assess MISS programs is through their technology.

Reality: The most critical factor is the surgeons who perform MISS. How much experience do they have? Are they fellowship-trained? Are they skilled in treating all spine problems? How many different types of spine surgeries have they performed? Does a multidisciplinary team support them? How high is their patient satisfaction? The technology is important, but the tools for MISS have been widely available for some time. The key is what our surgeons achieve with them.

MYTH 5 Many surgeons provide MISS.

Reality: Many surgeons and hospitals say they provide MISS. The truth is they may indeed use minimally invasive techniques—but only on a limited number of spine conditions. Few have the training or experience to provide the level of MISS options available at MedStar Georgetown University Hospital. Nationwide, only between 10 and 20 percent of spine surgeries are performed with minimally invasive techniques. Our fellowship-trained MISS specialists use them on 80 percent of the spine surgeries they perform.

MYTH 6 MISS is the best approach for all spine surgery.

Reality: MISS is the best approach for most, but not all, spine surgery. Traditional spine surgery remains the best option for about 20 percent of our cases and will continue to have a critical role to play. Our multidisciplinary team ensures that patients receive the appropriate treatment for their specific conditions.

Spine surgery is too important to go anywhere else.

In the right hands, MISS is a breakthrough for patients seeking relief from serious spine conditions. For the results you want, there's just one name: MedStar Georgetown University Hospital.

The Area's Most Talented MISS Surgeons ...

The quality of MISS is all about the surgeons who perform it. MedStar Georgetown University Hospital has some of the most talented, drawing on a widely respected team of neurosurgeons and orthopaedic surgeons specializing in MISS.

Two of our board-certified neurosurgeons received fellowship training at the University of Chicago, a pioneer in MISS. Widely recognized in the field, they have trained surgeons around the world and authored textbooks on MISS. One of our board-certified orthopaedic surgeons completed fellowship training at the Emory Orthopaedics & Spine Center in Atlanta, which included MISS techniques.

... and Most Experienced

Our surgeons perform 350 to 400 MISS procedures each year. This experience ensures our patients have the best outcomes and access to the most effective treatments and techniques. Few area spine surgeons perform MISS procedures, and only a handful apply the level of training and expertise available at MedStar Georgetown University Hospital.

Collaborative Care From Many Disciplines

MedStar Georgetown University Hospital is home to one of the most experienced teams of multidisciplinary spine specialists on the East Coast. In addition to the Minimally Invasive Spine Center, we can draw upon advanced expertise in areas like

interventional neuroradiology. Our unique partnership of neurosurgeons, orthopaedic surgeons and neuroradiologists ensures you receive the most thorough assessment and treatment plan for your needs.

Rehabilitation

As recovery begins and you return home, our expert collaborative care continues. If rehabilitation is required, you can work with specialists from the prestigious MedStar National Rehabilitation Network. Our physical medicine and rehabilitation specialists work with you to assess your pain and functional needs to provide you with the best treatment and outcome. And if you need help close to home, we can serve you at locations throughout metropolitan Washington, D.C., Maryland and Northern Virginia.

"I can hold the babies again."

Nigora Ishmukhamedova

Nigora is a teacher in a daycare for infants. Seven years ago, she began having back pain, which grew steadily worse in frequency and severity over time. "It was so painful to hold the babies. Getting out of the house was becoming impossible." Her husband took her to MedStar Georgetown University Hospital, where he had been treated for chronic back pain.

Initially Nigora was treated with steroid injections. When they didn't solve the problem, her neurosurgeon recommended MISS. This was a difficult decision for her. The year before, at a different hospital, Nigora underwent surgery for two brain tumors. The complications had been excessive. She had endured brain bleeding and a stroke. So while this new procedure would be minimally invasive, undergoing any surgery was scary.

The results turned fears to joy. "She feels like she never had the surgery!" says her husband. "She was walking by herself the next morning." Two days later, she went to the mall, just to prove she could. Today, Nigora is back to normal and back to work. "I'm telling everyone I know about the quality of care. My doctor found the treatment that was right for me." And best of all, Nigora can hold the infants at daycare again—pain-free.



Visit us at [MedStarGeorgetown.org/Spine](https://www.MedStarGeorgetown.org/Spine) or call 202-342-2400 to make an appointment today.

