

Minimally invasive spine surgery & artificial disc replacement helps back & neck pain patients back to activity

Artificial Disc Capabilities

Each year in the U.S., more than 200,000 spinal fusion surgeries are performed to relieve pain and weakness caused by degenerative discs in the low back and neck.

During a fusion procedure, the damaged disc is replaced with bone from a patient's hip or from a bone bank. Fusion surgery causes two vertebrae to become locked in place, putting additional stress on discs above and below, which can lead to further disc herniation with the discs above and below the degenerated disc.

in 2019, at the North American Spine Society



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annual meeting, research was presented that documented that the artificial disc in the neck reduced the incidence of "adjacent segment disease", that is, herniation of other levels above and below a fusion.

Dr. Rohan, Jr. was one of the first spine surgeons in Florida to be trained in artificial disc replacement in the neck.

"The advantages of an artificial disc over traditional cervical fusion is that the neck maintains normal motion and reduces the stress placed on the other discs in the neck," explains Dr. Rohan, Jr. "The goal with motion preservation is to retain the normal rotation of the neck and lessen the need for any future surgery

at other levels in the neck," he adds.

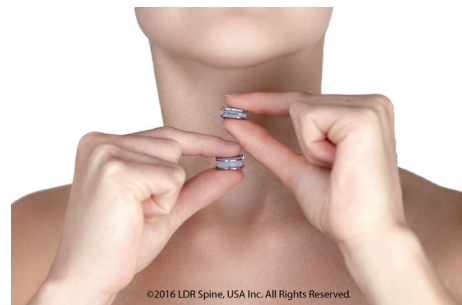
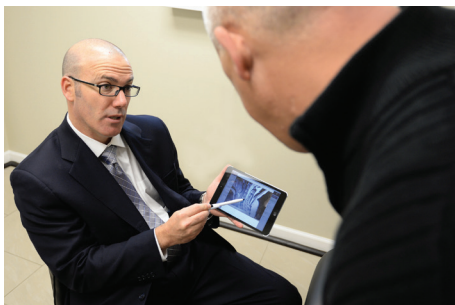
"The problem with herniated discs in the neck, is that there are few levels to provide all the necessary rotation. If you fuse one level you have less motion in the neck which then causes other discs to herniate. This is called adjacent segment disease. With the Mobi-C disc we can retain that normal movement in the neck and lessen the risk to the other discs at other levels."

Patients can learn more about new artificial discs at MichaelRohanSpine.com where they can request an appointment online, or by calling 904-204-5000.

Dr. Rohan Jr. can do an evaluation to see if they qualify for artificial disc replacement.

BENEFIT OF ARTIFICIAL DISC

- Retains motion of the vertebrae.
- Prevents damage to other disc levels.
- No bone graft required.
- Quicker recovery & return to activity.
- Less painful surgery than a fusion.
- Less blood loss during surgery.



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BENEFITS OF MINIMALLY INVASIVE SPINE SURGERY:

- Smaller incision & smaller scar
- Patient able to go home the same day
- Less damage to tissues
- Less pain after surgery
- Less blood loss or need for blood
- Less pain in recovery
- Faster return to activity
- No exposure to hospital-related injection or complications
- Less risk of complications from a larger incision

A COMMITMENT TO PATIENT EDUCATION

We believe the best healthcare quality comes from an informed consumer. As a community service, our spine practice distributes to primary care physicians a 36-page Home Remedy Book for back and neck pain and a symptom chart that has detailed information about treatment options for spine problems. Our educational spine encyclopedia at MichaelRohanSpine.com has home remedies and symptom charts that show when it's necessary to see the doctor.



Dr. Michael Rohan Spine
 Board-Certified Orthopedic Surgeon • Fellowship-Trained Spine Surgeon
 Specializing in Minimally Invasive Spine Surgery & Artificial Disc Replacement
 ONLINE SPINE ENCYCLOPEDIA ABOUT BACK AND NECK PAIN AT:
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MIDDLEBURG OFFICE:
 Opening August 2025

Appointments & 2nd opinions: **904-204-5000**

WHAT DO YOUR BACK OR NECK SYMPTOMS INDICATE?

PAIN IN THE AREA THAT EXTENDS DOWN OR UP THE LEG: This is an emergency symptom. This needs to be treated immediately by a spine surgeon within 48 hours. If you experience these symptoms at night or on the weekend, go to the emergency room. If an emergency room is not available, call 911. Do not wait. Do not try to self-treat. Do not take painkillers. Do not take any other medication. Do not do any exercise. Do not do any physical therapy. Do not do any massage. Do not do any chiropractic. Do not do any acupuncture. Do not do any yoga. Do not do any Pilates. Do not do any Tai Chi. Do not do any Qigong. Do not do any Reiki. Do not do any energy healing. Do not do any sound healing. Do not do any light therapy. Do not do any heat therapy. Do not do any cold therapy. Do not do any electrical stimulation. Do not do any magnetic therapy. Do not do any ultrasound. Do not do any laser therapy. Do not do any radiofrequency. Do not do any cryotherapy. Do not do any phototherapy. Do not do any iontophoresis. Do not do any phonophoresis. Do not do any diathermy. Do not do any hyperbaric oxygen. Do not do any hyperbaric nitrogen. Do not do any hyperbaric helium. Do not do any hyperbaric argon. Do not do any hyperbaric neon. Do not do any hyperbaric krypton. Do not do any hyperbaric xenon. Do not do any hyperbaric radon. Do not do any hyperbaric thoron. Do not do any hyperbaric actin. Do not do any hyperbaric protactinium. Do not do any hyperbaric uranium. Do not do any hyperbaric plutonium. Do not do any hyperbaric americium. Do not do any hyperbaric curium. Do not do any hyperbaric berkelium. Do not do any hyperbaric californium. Do not do any hyperbaric einsteinium. Do not do any hyperbaric fermium. Do not do any hyperbaric mendelevium. Do not do any hyperbaric nobelium. Do not do any hyperbaric lawrencium. Do not do any hyperbaric roentgenium. Do not do any hyperbaric meitnerium. Do not do any hyperbaric darmstadtium. Do not do any hyperbaric rolandium. Do not do any hyperbaric copernicium. Do not do any hyperbaric nihonium. Do not do any hyperbaric flerovium. Do not do any hyperbaric livermorium. Do not do any hyperbaric tennessine. Do not do any hyperbaric oganesson.

PAIN LIMITED TO THE NECK: This is an emergency symptom. This needs to be treated immediately by a spine surgeon within 48 hours. If you experience these symptoms at night or on the weekend, go to the emergency room. If an emergency room is not available, call 911. Do not wait. Do not try to self-treat. Do not take painkillers. Do not take any other medication. Do not do any exercise. Do not do any physical therapy. Do not do any massage. Do not do any chiropractic. Do not do any acupuncture. Do not do any yoga. Do not do any Pilates. Do not do any Tai Chi. Do not do any Qigong. Do not do any Reiki. Do not do any energy healing. Do not do any sound healing. Do not do any light therapy. Do not do any heat therapy. Do not do any cold therapy. Do not do any electrical stimulation. Do not do any magnetic therapy. Do not do any ultrasound. Do not do any laser therapy. Do not do any radiofrequency. Do not do any cryotherapy. Do not do any phototherapy. Do not do any iontophoresis. Do not do any phonophoresis. Do not do any diathermy. Do not do any hyperbaric oxygen. Do not do any hyperbaric nitrogen. Do not do any hyperbaric helium. Do not do any hyperbaric argon. Do not do any hyperbaric neon. Do not do any hyperbaric krypton. Do not do any hyperbaric xenon. Do not do any hyperbaric radon. Do not do any hyperbaric thoron. Do not do any hyperbaric actin. Do not do any hyperbaric protactinium. Do not do any hyperbaric uranium. Do not do any hyperbaric plutonium. Do not do any hyperbaric americium. Do not do any hyperbaric curium. Do not do any hyperbaric berkelium. Do not do any hyperbaric californium. Do not do any hyperbaric einsteinium. Do not do any hyperbaric fermium. Do not do any hyperbaric mendelevium. Do not do any hyperbaric nobelium. Do not do any hyperbaric lawrencium. Do not do any hyperbaric roentgenium. Do not do any hyperbaric meitnerium. Do not do any hyperbaric darmstadtium. Do not do any hyperbaric rolandium. Do not do any hyperbaric copernicium. Do not do any hyperbaric nihonium. Do not do any hyperbaric flerovium. Do not do any hyperbaric livermorium. Do not do any hyperbaric tennessine. Do not do any hyperbaric oganesson.

PAIN LIMITED TO THE LOW BACK: This is an emergency symptom. This needs to be treated immediately by a spine surgeon within 48 hours. If you experience these symptoms at night or on the weekend, go to the emergency room. If an emergency room is not available, call 911. Do not wait. Do not try to self-treat. Do not take painkillers. Do not take any other medication. Do not do any exercise. Do not do any physical therapy. Do not do any massage. Do not do any chiropractic. Do not do any acupuncture. Do not do any yoga. Do not do any Pilates. Do not do any Tai Chi. Do not do any Qigong. Do not do any Reiki. Do not do any energy healing. Do not do any sound healing. Do not do any light therapy. Do not do any heat therapy. Do not do any cold therapy. Do not do any electrical stimulation. Do not do any magnetic therapy. Do not do any ultrasound. Do not do any laser therapy. Do not do any radiofrequency. Do not do any cryotherapy. Do not do any phototherapy. Do not do any iontophoresis. Do not do any phonophoresis. Do not do any diathermy. Do not do any hyperbaric oxygen. Do not do any hyperbaric nitrogen. Do not do any hyperbaric helium. Do not do any hyperbaric argon. Do not do any hyperbaric neon. Do not do any hyperbaric krypton. Do not do any hyperbaric xenon. Do not do any hyperbaric radon. Do not do any hyperbaric thoron. Do not do any hyperbaric actin. Do not do any hyperbaric protactinium. Do not do any hyperbaric uranium. Do not do any hyperbaric plutonium. Do not do any hyperbaric americium. Do not do any hyperbaric curium. Do not do any hyperbaric berkelium. Do not do any hyperbaric californium. Do not do any hyperbaric einsteinium. Do not do any hyperbaric fermium. Do not do any hyperbaric mendelevium. Do not do any hyperbaric nobelium. Do not do any hyperbaric lawrencium. Do not do any hyperbaric roentgenium. Do not do any hyperbaric meitnerium. Do not do any hyperbaric darmstadtium. Do not do any hyperbaric rolandium. Do not do any hyperbaric copernicium. Do not do any hyperbaric nihonium. Do not do any hyperbaric flerovium. Do not do any hyperbaric livermorium. Do not do any hyperbaric tennessine. Do not do any hyperbaric oganesson.

PAIN RADIATING BELOW THE KNEE: This is an emergency symptom. This needs to be treated immediately by a spine surgeon within 48 hours. If you experience these symptoms at night or on the weekend, go to the emergency room. If an emergency room is not available, call 911. Do not wait. Do not try to self-treat. Do not take painkillers. Do not take any other medication. Do not do any exercise. Do not do any physical therapy. Do not do any massage. Do not do any chiropractic. Do not do any acupuncture. Do not do any yoga. Do not do any Pilates. Do not do any Tai Chi. Do not do any Qigong. Do not do any Reiki. Do not do any energy healing. Do not do any sound healing. Do not do any light therapy. Do not do any heat therapy. Do not do any cold therapy. Do not do any electrical stimulation. Do not do any magnetic therapy. Do not do any ultrasound. Do not do any laser therapy. Do not do any radiofrequency. Do not do any cryotherapy. Do not do any phototherapy. Do not do any iontophoresis. Do not do any phonophoresis. Do not do any diathermy. Do not do any hyperbaric oxygen. Do not do any hyperbaric nitrogen. Do not do any hyperbaric helium. Do not do any hyperbaric argon. Do not do any hyperbaric neon. Do not do any hyperbaric krypton. Do not do any hyperbaric xenon. Do not do any hyperbaric radon. Do not do any hyperbaric thoron. Do not do any hyperbaric actin. Do not do any hyperbaric protactinium. Do not do any hyperbaric uranium. Do not do any hyperbaric plutonium. Do not do any hyperbaric americium. Do not do any hyperbaric curium. Do not do any hyperbaric berkelium. Do not do any hyperbaric californium. Do not do any hyperbaric einsteinium. Do not do any hyperbaric fermium. Do not do any hyperbaric mendelevium. Do not do any hyperbaric nobelium. Do not do any hyperbaric lawrencium. Do not do any hyperbaric roentgenium. Do not do any hyperbaric meitnerium. Do not do any hyperbaric darmstadtium. Do not do any hyperbaric rolandium. Do not do any hyperbaric copernicium. Do not do any hyperbaric nihonium. Do not do any hyperbaric flerovium. Do not do any hyperbaric livermorium. Do not do any hyperbaric tennessine. Do not do any hyperbaric oganesson.

FOOT DROP / WEAKNESS IN FOOT: This is an emergency symptom. This needs to be treated immediately by a spine surgeon within 48 hours. If you experience these symptoms at night or on the weekend, go to the emergency room. If an emergency room is not available, call 911. Do not wait. Do not try to self-treat. Do not take painkillers. Do not take any other medication. Do not do any exercise. Do not do any physical therapy. Do not do any massage. Do not do any chiropractic. Do not do any acupuncture. Do not do any yoga. Do not do any Pilates. Do not do any Tai Chi. Do not do any Qigong. Do not do any Reiki. Do not do any energy healing. Do not do any sound healing. Do not do any light therapy. Do not do any heat therapy. Do not do any cold therapy. Do not do any electrical stimulation. Do not do any magnetic therapy. Do not do any ultrasound. Do not do any laser therapy. Do not do any radiofrequency. Do not do any cryotherapy. Do not do any phototherapy. Do not do any iontophoresis. Do not do any phonophoresis. Do not do any diathermy. Do not do any hyperbaric oxygen. Do not do any hyperbaric nitrogen. Do not do any hyperbaric helium. Do not do any hyperbaric argon. Do not do any hyperbaric neon. Do not do any hyperbaric krypton. Do not do any hyperbaric xenon. Do not do any hyperbaric radon. Do not do any hyperbaric thoron. Do not do any hyperbaric actin. Do not do any hyperbaric protactinium. Do not do any hyperbaric uranium. Do not do any hyperbaric plutonium. Do not do any hyperbaric americium. Do not do any hyperbaric curium. Do not do any hyperbaric berkelium. Do not do any hyperbaric californium. Do not do any hyperbaric einsteinium. Do not do any hyperbaric fermium. Do not do any hyperbaric mendelevium. Do not do any hyperbaric nobelium. Do not do any hyperbaric lawrencium. Do not do any hyperbaric roentgenium. Do not do any hyperbaric meitnerium. Do not do any hyperbaric darmstadtium. Do not do any hyperbaric rolandium. Do not do any hyperbaric copernicium. Do not do any hyperbaric nihonium. Do not do any hyperbaric flerovium. Do not do any hyperbaric livermorium. Do not do any hyperbaric tennessine. Do not do any hyperbaric oganesson.

Minimally invasive spine surgery

Once non-surgical options have been exhausted and the patient still has serious symptoms like radiating pain or numbness and weakness into an arm or leg, the patient needs to promptly see a spine surgeon. Otherwise, the symptoms of numbness and weakness in a hand or foot can become permanent and lifelong.

Using tubular retractors the size of a ballpoint pen, Dr. Rohan, Jr. is able to operate through a one-inch incision rather than a longer 3-inch incision which is typically for many other spine surgeons.

Minimally invasive spine surgery takes significant training, but it provides

great benefits to the patient. A shorter incision makes for a less painful and faster return to activity. Many patients are able to go home the same day to recover in the comfort of their own home.



Spine surgeries performed by Dr. Michael Rohan, Jr.

Cervical artificial disc replacement

Dr. Rohan, Jr. was one of the first spine surgeons in Florida trained in artificial disc replacement in the neck. Traditional surgery to treat herniated discs in the neck is called Anterior Cervical Discectomy and Fusion (ACDF). The issue with an ACDF is that it fuses and locks two of the seven neck vertebrae which restricts movement and can cause other discs above and below to also herniate. Research has shown that the preferred surgery, for those patients who qualify for it, is to preserve the motion of the neck with an artificial disc. The surgeon accesses the spine through the front of the neck to reach the herniated disc and replaces it with an appropriate artificial disc implant.



the spinal nerve and disc, the surgeon will retract the nerve, remove the damaged disc, and replaces the disc with bone graft material.

MIS Lumbar Fusion

A minimally invasive lumbar fusion can be performed the same way as traditional open lumbar fusion, either from the back, through the abdomen, or from the side.

MIS Transforaminal lumbar interbody fusion (MIS TLIF)

Minimally Invasive Transforaminal Lumbar Interbody Fusion (MIS TLIF) is less invasive than a traditional Transforaminal Lumbar Interbody Fusion or (open TLIF). An open TLIF can cause disruption to muscles resulting in more post surgery pain during recovery. The goal of a MIS TLIF is to relieve symptoms of a herniated disc along with addressing any instability issues with the vertebrae. In a MIS TLIF surgery, the spine surgeon accesses the spine through a small tube. A microscope magnifies the surgical site. The degenerated disc is removed and an interbody fusion can be done by inserting a spacer filled with bone graft or bone substitute into the disc space.

Posterior cervical microforaminotomy (PCMF)

A PCMF is performed to help relieve pressure and discomfort in the spine by making a small incision in the back of the neck and removing excess scar tissue and bone graft material.

Minimally invasive spine surgery involves a much smaller incision and enables many patients to go home the same day without a hospital stay. Dr. Rohan Jr. performs a variety of minimally invasive spine surgeries, including:

MIS Lumbar Discectomy

A minimally invasive lumbar discectomy is performed to repair a herniated disc in the low back that may press on a spinal nerve, causing radiating leg pain, numbness, or weakness. Through a small 1-inch incision a tubular retractor is inserted to access the disc. The surgeon then removes a small amount of the lamina bone that allows the surgeon to view the spinal nerve and disc. Once the surgeon can view

PHYSICIAN PROFILE

Michael X. Rohan Jr., D.O.

Board-certified orthopedic surgeon

Fellowship-trained in spine

Specializing in minimally invasive spine surgery, motion preservation & artificial disc replacement

Dr. Rohan, Jr. specializes in the treatment of back and neck pain, including degenerative disease, spinal deformity (scoliosis) and spinal trauma.

Dr. Rohan, Jr. received his D.O. degree from Nova Southeastern University College of Osteopathic Medicine and completed his orthopedic surgery residency at the University of Medicine in New Jersey.

He then completed a spine surgery fellowship at the world-renowned Texas Back Institute where he learned some of the latest innovations in minimally invasive spine surgery, motion preservation surgery and artificial disc replacement.

Dr. Rohan, Jr. is a member of the American Osteopathic Academy of Orthopedics and is able to surgically treat problems in the cervical, thoracic, and lumbar spine. He has also participated in spine surgery research projects and has published his results in the annual meeting of the North American Spine Society.



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Appointments & 2nd opinions: **904-204-5000**