

SpineMed SPECIALISTS, L.C.

REPORT

Motion Preservation Techniques for the Spine



As doctors and spinal specialists gain more insight into maintaining and improving spinal health, better treatments and surgeries are under development. Today, spinal surgeons like Dr. Thomas Frimpong seek spinal treatments and surgeries for herniated disc and spinal stenosis that focus on motion-preservation instead of spinal fusion. Thanks to improved research, innovation, and technological advancements in spinal medicine, many new spinal treatment techniques are being developed with motion preservation in mind.

— continued on page 2

Practice of interventional spinal diagnostics and minimally invasive treatment of spinal origin pain.

A New Name

With the addition of Dr. Thomas Frimpong, the scope of services offered by Pain Management Associates expands considerably. Not only is a full range of Interventional Pain Management procedures offered, but also, world class Neurological Surgical procedures by a board certified and fellowship trained neurosurgeon. To better reflect this considerable expansion in services we chose the name SpineMed Specialists, LC. As we move forward, we will be using both names, SpineMed Specialists and Pain Management Associates.



Motion Preservation Techniques for the Spine (cont.)



M6-C cervical artificial disc



Anterior cervical fusion



Prodisc L



Lumbar instrumented fusion

■ Spinal Fusion vs. Motion Preservation Surgery

In the past, spinal surgery of any kind was cause for concern. Patients who required spinal surgery were usually looking at an invasive spinal fusion procedure. While this type of surgery has successfully reduced patients' chronic pain, this relief comes with a significant reduction in mobility. In addition, while the procedure was safe and effective, the fused vertebrae caused limited spinal motion and added stress to adjacent vertebrae.

New motion preservation treatments and surgeries can overcome the shortfalls of traditional spinal fusion surgery. Some of the benefits include:

- Shorter recovery
- Maintaining spine movement and flexibility
- Less stress on the adjacent level, reducing the rate of a revision surgery
- Less surgical blood loss
- No bone graft required

Limitations with cervical and lumbar artificial disc:

- Artificial disc may last from 15 to 20 years, with the likelihood that they will need to be revised in the future because the patient outlived the lifespan of an artificial disc.

- Obese patients can wear out artificial lumbar disc prematurely.
- Because of the weight distribution of the human body, more stress is placed on artificial discs in the lumbar spine than the cervical spine.
- Not all disc herniations are suitable to be replaced by an artificial disc.
- Artificial disc technology is still evolving, and the prospect of improved technology approved by the FDA makes older versions obsolete.
- Typically, an artificial lumbar disc requires an access surgeon to expose the abdomen for a lumbar disc.

■ Types of Motion Preservation Treatments

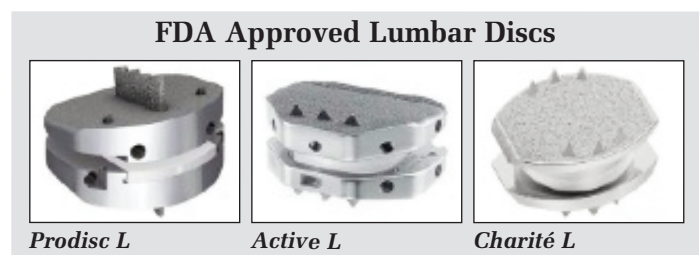
Due to the number of possible issues that may require corrective spinal treatment, surgeons and medical researchers have developed a wide range of motion preservation treatment

When gathering information about motion preserving spinal procedures, patients should not forget many possible treatments and devices available. It is the job of the spinal surgeon or specialist to accurately identify the cause of a patient's pain and determine which device or procedure can best solve the issue.

Cervical Disc & Lumbar Disc Arthroplasty

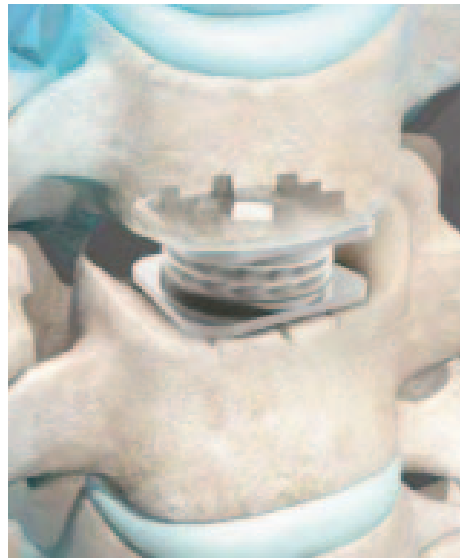
Cervical disc arthroplasty is a well-documented treatment designed to preserve spinal mobility. The procedure involves using spinal implants that can adequately replace damaged discs in the patient's spine, rather than fusing the damaged vertebrae to healthy ones.

Lumbar Disc Arthroplasty (LDA) works similarly to cervical disc arthroplasty, though due to the higher impact nature of lumbar spine injuries, preserving motion in this area can be more difficult. Fortunately, there are several examples of successful spinal treatment through LDA, and new disc replacement technology has helped patients recover better and maintain their level of mobility.



M6 Cervical Disc by Orthofix

Orthofix's M6 Cervical Disc is an example of a motion preservation device designed to replace natural spinal discs. It mimics the natural disc's movement, including backward and forward, side to side, up and down, and rotation so that patients can retain their range of motion after surgery. Made with materials specifically designed and selected for surgical implants, such as ultra-high molecular weight polyethylene and titanium coating, the M6 Cervical Disc is among the most advanced motion-preserving devices available today.

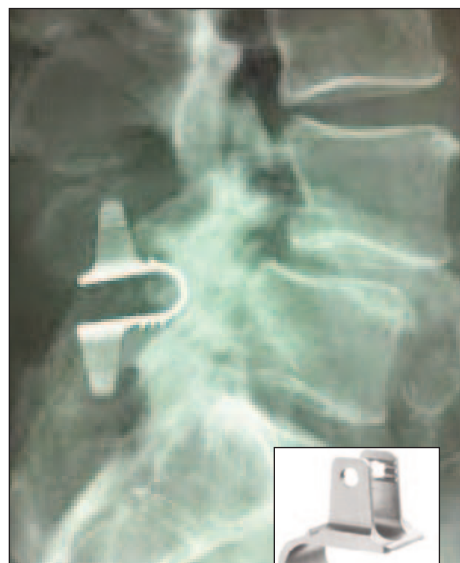
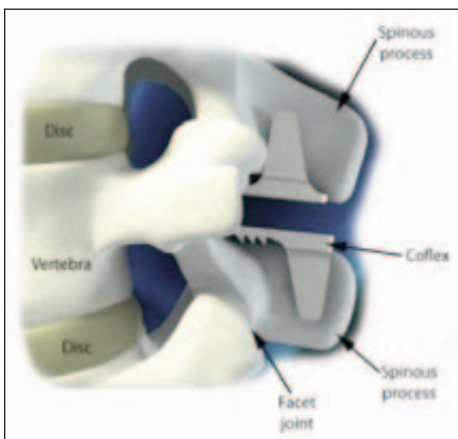


M6-C cervical artificial disc

Spine Fellowship-trained Neurosurgeon Dr. Thomas Frimpong at SpineMed Specialists was one of the first surgeons in Wichita, Kansas to use the M6 cervical disc. The M6 disc provides shock absorption in addition to retaining rotation.

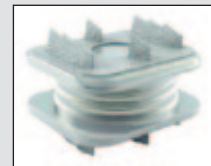
Coflex Dynamic Interlaminar Stabilization Procedure

Coflex Dynamic Interlaminar stabilization device is a non-fusion implant approved by the FDA in 2012. In 1994, the French orthopedic surgeon Jacques Samani invented the device as an alternative to fusion to decrease adjacent level degenerative disease and preserve some mobility following lumbar spine surgery. Coflex is a U-shaped titanium alloy implant with pairs of wings that surround the superior and inferior spinous processes. It is implanted after laminotomy to unload the facet joints, restore foraminal height, and provide stability to improve pain and relief pressure on the thecal sac and nerve roots. Advantages of Coflex interlaminar stabilization compared with lumbar spinal fusion in the treatment of L-1 to L-5 spinal stenosis and Grade 1 spondylolisthesis includes decrease adjacent level disease, shorter operative times, less blood loss, and decrease the length of stay. However, complications associated with the Coflex device reported in the literature include prosthesis loosening and spinous process fracture.



Coflex Dynamic Interlaminar Stabilization Device

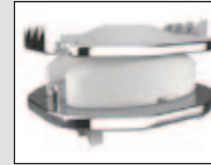
FDA Approved Cervical Discs



M6 Disc



Bryan Disc



Mobi-C Disc



PCM Disc



Prestige LP Disc



Prodisc-C



Simplify Disc



Secure-C Disc

Conclusion

While spinal fusion procedures have a well-documented history of successfully relieving pain among a wide variety of patients with different spinal conditions, the major downside of these treatments is reduced mobility and adjacent level disease. The goal of motion preservation for future spinal treatments and surgeries can help relieve pain while retaining motion. In addition, these updated motion preservation surgeries and devices allow patients to enjoy a faster recovery time, decrease the chance of adjacent level disease and future revision surgery. As more companies continue to improve the technology behind motion preserving spinal devices, the future is starting to look brighter for patients impacted by spinal issues. Spinal surgeons can also continue to research and develop improved methods of motion-preserving treatments that incorporate these new devices, with far fewer side effects and downtime for patients. ■

Providing world class interventional spinal diagnostic and treatment services in a compassionate state of the art environment.

Get to know ...

SpineMed Specialists (Pain Management Associates, L.C.)

Doctors Rodney Jones and Thomas Frimpong along with the dedicated staff of nurses, x-ray technologists, and office management personnel comprise SpineMed Specialists and Pain Management Associates. Dr. Frimpong is board certified in neurosurgery with fellowship training in minimally invasive and complex spine surgery. Dr. Jones is a board certified anesthesiologist with additional certifications in Pain Management and Addiction Medicine. Dr. Jones is an Assistant Clinical Professor at the University of Kansas School of Medicine-Wichita Anesthesia Department. Dr. Frimpong served as an attending physician at Bassett Healthcare – Columbia University College of Physicians and Surgeons where he completed his fellowship training. For three years he served as attending neurosurgeon at Trinity Health in Minot, ND.

Dr. Jones has practiced pain medicine for over thirtyfive years and is an active member of the Spine Intervention Society where he serves as a Master Instructor.

Dr. Jones was named “Instructor of the Year” for 2019 Dr. Rodney Jones from a group of over 60 instructors mostly from large academic teaching institutions. He has published in peer reviewed journals and has authored book chapters.

Dr. Frimpong offers a complete array of neurological surgery procedures with emphasis on minimally invasive and complex spine surgeries. The physicians and staff are dedicated to the safe and accurate diagnosis and effective treatment of



Dr. Rodney Jones



Dr. Thomas Frimpong

chronic pain and disability of the spine using up to date, evidence-based techniques and surgical interventions when indicated.

SpineMed Specialists and Pain Management Associates provide world class services for workers compensation, all major insurances, Medicare, self-pay and “Boutique Health” services to improve function and reduce pain and disability in a compassionate, timely and cost effective manner. SpineMed Specialists and Pain Management Associates strive to be the patient advocate and payor’s insider for the best possible outcome. ■

For referrals or more information contact:
316-733-9393 • SpineMedSpecialists.com