

What you need to know about

Artificial Disc Replacement



The Center for Disc Replacement
at Texas Health Center for Diagnostics & Surgery

 **Texas Health**
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A new hope for back and neck pain relief

Healthy intervertebral discs are important for allowing our neck and spine to remain flexible and afford full mobility. As we age, these discs can degenerate or become herniated, which can produce severe pain and cause a decrease or complete loss of function.

In the past, care for chronic pain from a degenerated disc was spinal fusion surgery, but medical advancements in artificial disc replacement surgery now allow patients to have a new option. Artificial disc replacement offers patients the opportunity to retain mobility and resume their lives with minimal pain or discomfort. What used to require a lengthy recovery period, loss of mobility and the potential for additional surgeries has now been replaced.

Perhaps your doctor suggested traditional spine surgery, but you don't want to give up the activities you love, and you're looking for a different option. Maybe you've heard about artificial disc replacement surgery, but you need more information. No matter the case, this E-book is for you.



Understanding the spine

Stretching down from the base of the skull to the tailbone, the spine plays an extremely important role in our bodies as it supports the upper body's weight, provides posture while allowing for movement and flexibility, and protects the spinal cord. The spine contains 24 separate bones (vertebrae) interspaced with cartilage (discs) that act as shock absorbers. The vertebrae and discs allow a healthy spine to bend side-to-side, forward-to-back and turn left-to-right.

Two of the five major regions of the spine are **cervical** and **lumbar**.

Cervical

The section of the spine in the neck is known as the cervical spine. Seven vertebrae make up the cervical spine. **Doctors refer to these vertebrae as C1 to C7.**

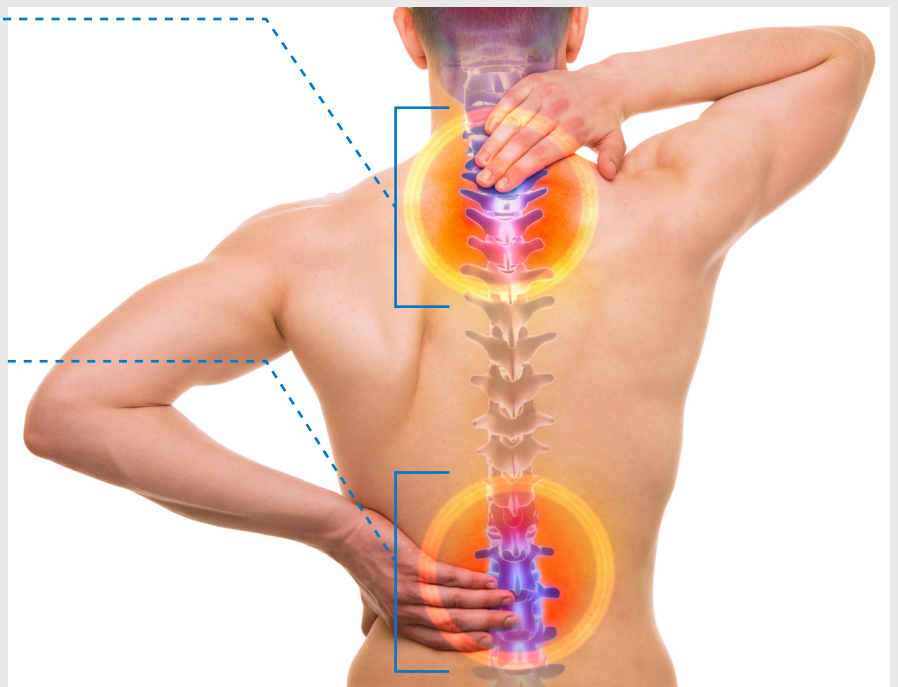
Disc replacement typically occurs at cervical spine levels C4-5, C5-6, or C6-7.

Lumbar

The section of the spine in the lower back is known as the lumbar spine. Five vertebrae make up the lumbar spine. **Doctors refer to these vertebrae as L1 to L5.**

Disc replacement typically occurs at lumbar spine levels L4-S1*.

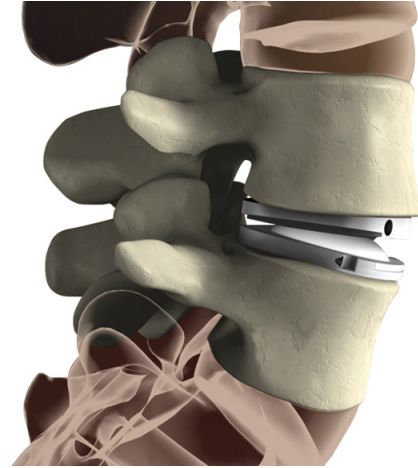
*The sacral base (S1) is the flat triangular shaped bone located below the last lumbar vertebra (L5).



Source: Spine-health.com

How artificial disc replacement works

Artificial disc replacement, or ADR (also referred to as total disc replacement), is a type of arthroplasty used to treat chronic, severe back and neck pain. It is a surgical procedure in which degenerated intervertebral discs in the spinal column are replaced with artificial devices in the lumbar (lower back) or cervical (neck) spine. This procedure helps to stabilize the spine while maintaining a natural movement of range and motion. Maintaining the natural range of motion reduces the degeneration of adjacent discs and lowers the risk of additional disc injuries over time that may lead to additional surgeries. The artificial disc allows for flexion, extension and rotation through the device, therefore preserving the spine's normal range of motion and flexibility.



Cervical ADR

In cervical ADR surgery, the surgeon makes a small one- to two-inch incision on the side or front of your neck. The important structures of the neck are carefully moved to the side until the surgeon can see the front of the cervical spine. The affected disc is then removed, and the artificial disc is inserted in its place. The procedure takes approximately 1-2 hours.



Lumbar ADR

In lumbar ADR surgery, the surgeon makes an incision in the abdomen. The abdominal muscles are gently spread apart, and the intestines and large blood vessels are moved to the side until the surgeon can see the front of the lumbar spine. The affected disc is then removed, and the artificial disc is inserted in its place. The procedure takes approximately 2-3 hours.



How does ADR compare to traditional spine surgery?

Learn what sets artificial disc replacement apart from traditional pain relief procedures.

Artificial Disc Replacement

Mobility

ADR replaces the natural disc with an artificial disc, allowing for a natural range of motion.

Potential Risk of Future Surgery

ADR places less stress on adjacent discs. Less stress equals less risk of degeneration at adjacent disc levels, which reduces the need for additional surgeries.

Recovery Time*

- Return home 1-2 days after surgery
- Start physical therapy sooner
- Recover quickly; able to return to work in 2-4 weeks
- Gradually begin to bend, twist and lift 4-6 weeks after surgery
- Resume recreational activities after 2-3 months

*Individual results may vary.

Who's a Candidate

Candidates for ADR have the following characteristics:

- Neck pain with or without arm pain
- Lower back pain with or without leg pain
- Conservative treatment without significant relief of pain
- Degenerative disc disease
- Herniated cervical or lumbar discs
- Previous disc surgery with continued pain
- Have been told they should have a fusion

Spinal Fusion Surgery

Mobility

Fusion surgery stops pain by eliminating movement at the painful vertebral segment, resulting in a loss of flexibility.

Potential Risk of Future Surgery

Fusion places stress on adjacent discs, potentially allowing those discs to degenerate and require further surgery.

Recovery Time*

- Return home 1-3 days after surgery
- Most required to wear a brace for up to 3 months after surgery
- 3-6 months for bone graft to mature and solidify
- Full recovery usually takes up to 6-8 months

*Individual results may vary.

Who's a Candidate

Candidates for fusion surgery have the following characteristics:

- Neck pain with or without arm pain
- Lower back pain with or without leg pain
- Conservative treatment without significant relief of pain
- Degenerative disc disease
- Scoliosis
- Spinal instability
- Spinal fractures
- Deformities of the spine

Meet the physicians

The Center for Disc Replacement at Texas Health Center for Diagnostics & Surgery is led by internationally-recognized spine surgeons on the medical staff who continue to be leaders in artificial disc replacement. Beginning in 2000 with the first ever ADR surgery performed in the United States, the world-class surgeons have performed more than 2,500 artificial disc replacement procedures with 14 different types of ADR devices. Being world-class leaders of spine care, these surgeons also participate in and are committed to clinical research that allows early access to the latest arthroplasty technologies. If you're suffering from chronic back or neck pain, consider a consultation with one of the spine surgeons on our medical staff. It's your time to get back to life.



Left to right: Dr. Jessica Shellock, Dr. Scott L. Blumenthal, Dr. Richard D. Guyer, Dr. Jack E. Zigler

Physicians

Dr. Scott L. Blumenthal

Scott L. Blumenthal, M.D., is a spine surgeon on the medical staff at Texas Health Center for Diagnostics & Surgery. Dr. Blumenthal is the first and only surgeon in the United States to devote his practice solely to the research and application of artificial disc replacement. Dr. Blumenthal is a leader in spinal arthroplasty working with a large number of discs currently on the market and in trials. He serves as a clinical assistant professor of orthopedic surgery at the University of Texas Southwestern in Dallas and is an ongoing contributor to the first non-profit foundation created for arthroplasty patients.

Dr. Richard D. Guyer

Richard Guyer, M.D. is a spine surgeon on the medical staff at Texas Health Center for Diagnostics & Surgery. Dr. Guyer performed the third artificial disc replacement in the United States. Dr. Guyer earned his medical degree from the University of Pennsylvania School of Medicine. He completed his internship at Parkland Memorial Hospital in Dallas, TX and continued with his residency program in Orthopedic Surgery at the Hospital of the University of Pennsylvania. Dr. Guyer then completed two spine fellowships in Ohio and California. He lectures extensively nationally and internationally, teaching surgical techniques and lecturing on the results of lumbar and cervical ADR. He performed the first ADR in Chile and was the first US surgeon to perform ADR in Brazil.

Dr. Jessica Shellock

Jessica Shellock, M.D. is a spine surgeon on the medical staff at Texas Health Center for Diagnostics & Surgery and The Center for Disc Replacement. Dr. Shellock is a Board Certified Orthopedic Surgeon who completed her residency in orthopedic surgery at the University of Florida and fellowship in spine surgery at the Texas Back Institute where she is in private practice. Dr. Shellock specializes in all aspects of neck and back surgery, including minimally invasive techniques as well as artificial disc replacement. Her personal quote is "Don't let back or neck pain control your life any longer. There are now many new treatment options, including minimally invasive surgical techniques that we can discuss. It's time to take your life back!"

Dr. Jack E. Zigler

Jack Zigler, M.D. is a spine surgeon on the medical staff at Texas Health Center for Diagnostics & Surgery. Dr. Zigler holds a board certification from the American Board of Orthopedic Surgery. In October 2001, Dr. Zigler performed the first ProDisc-L lumbar ADR in the United States and has been implanting ProDisc-L and ProDisc-C for over 10 years. He lectures regularly on the results of lumbar and cervical ADR in addition to teaching surgical techniques to spine surgeons all over the world. Dr. Zigler earned his Medical Degree from SUNY Upstate Medical Center in Syracuse, NY. Dr. Zigler was the Arnold Fellow in Spine Surgery at Case Western Reserve University School of Medicine in Cleveland, Ohio.

Program Director

Jennifer Tullis MBA, BSN, RN ONC

Jennifer has 13 years of healthcare experience, with more than 8 years experience as an orthopedic certified nurse in orthopedic service line leadership, focused in patient-centric care driven by best practices.

If you would like more information about artificial disc replacement surgery, physicians on our medical staff or our hospital, please call our Director, Jennifer Tullis: 844-544-9501 or send us an E-mail: TheCenterforDiscReplacement@thcds.com

Explore our hospital

The decision to undergo artificial disc replacement should only be made after consultation with a spine surgeon. But if you and your doctor decide that it's the right course of treatment for your neck and spine pain, then Texas Health Center for Diagnostics and Surgery is where you'll want to be.

Designed with a boutique hotel in mind, we offer a more comfortable setting than what is typically offered in a large, full-service traditional hospital. From a gourmet coffee bar in the lobby to room service meals prepared by a culinary trained chef, our entire staff is driven by compassionate care to provide an overall exceptional hospital experience for you and your family. We invite you to see how much of a difference our extraordinary staff and a healing, peaceful environment can make in your surgical process.




Start your journey

To make an appointment, or for additional information, please call:

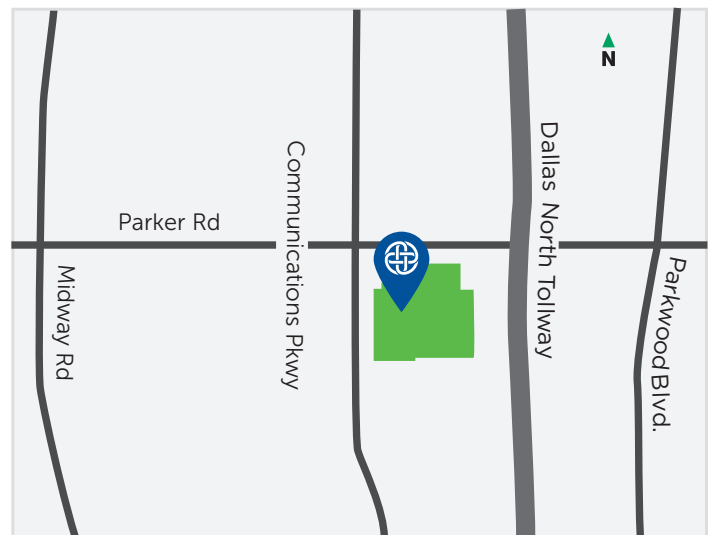
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