

CENTINEL SPINE® 

RELIEVE YOUR *neck* PAIN

*A Patient's Guide to Treating DDD
& How **STALIF C**® Can Help*



Anterior Cervical
Integrated Interbody™ Systems

THERE IS *hope*

With **STALIF C®** ...
You Don't Have to Live with Neck Pain





Day after day, from morning to evening, your chronic neck pain impacts everything you do. Whether you are having difficulty performing your job, spending time with your family, or even enjoying the simplest daily pleasures, it is time to take away your neck pain.

STALIF gives you an option.

If your doctor has recommended spinal fusion to alleviate your neck pain, you can read this guide to help you and your doctor choose the option that is best for you.

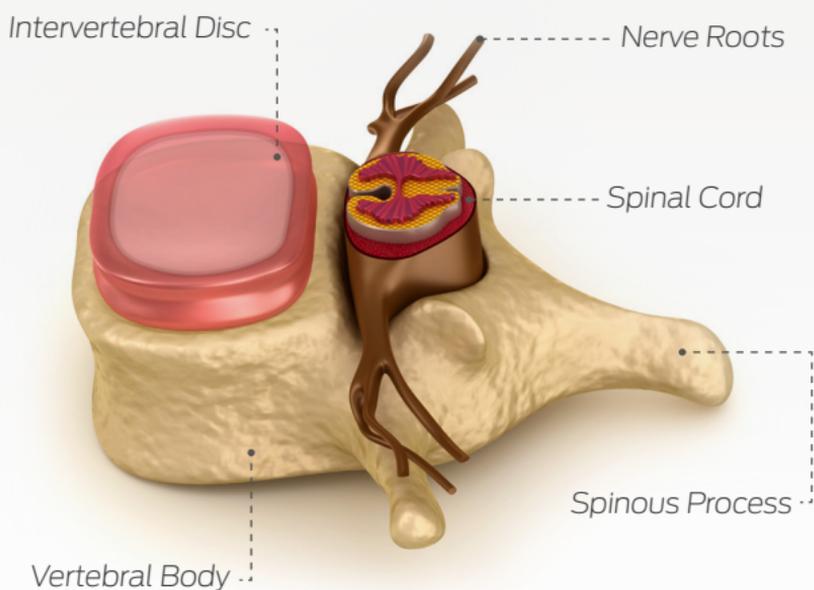
THE *cervical* SPINE

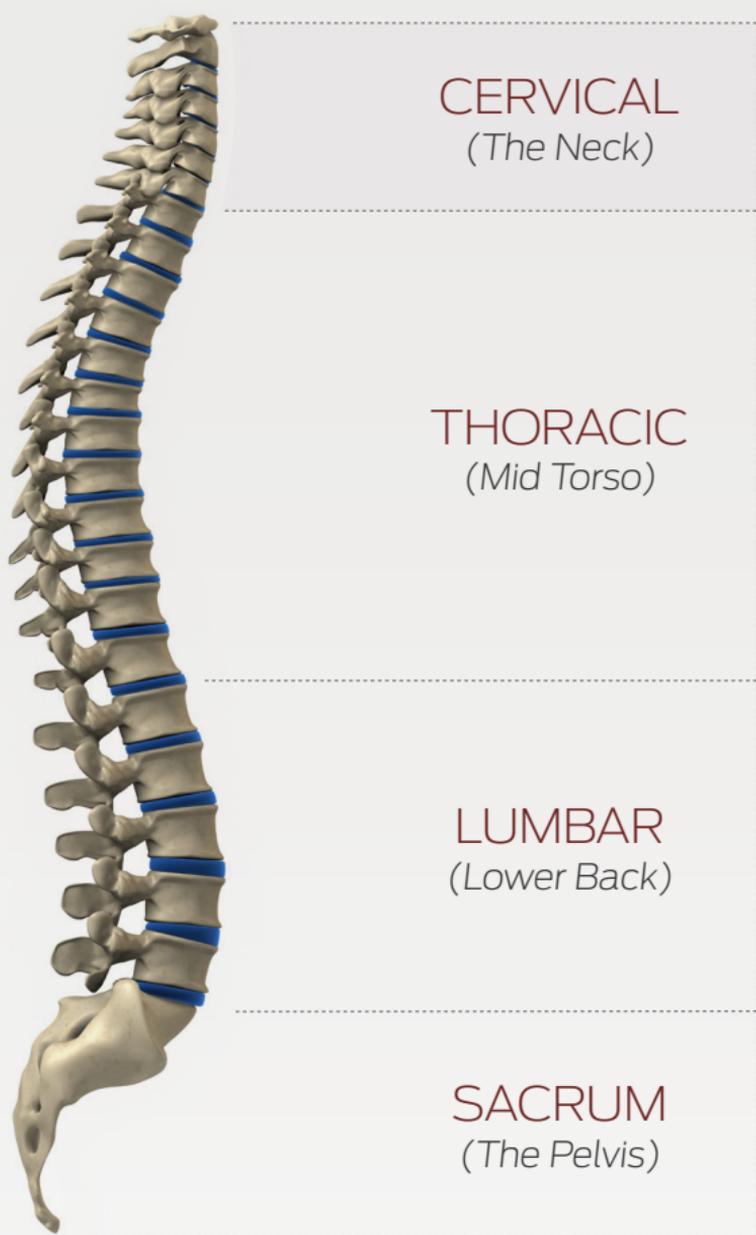
Your Neck

All voluntary movement in your body is controlled by the brain, whose main communication pathway to the muscles is a large bundle of nerves collectively known as the *spinal cord*. Protection for this critical pathway is provided by the bones of the spinal column.

These bones, or *vertebral bodies*, have a number of important functions—one is to encircle and guard your spinal cord against trauma and another is to provide the skeletal support we need to walk upright.

Between each pair of vertebrae is a *spinal disc* that acts like a shock absorber and provides flexibility during your daily activities.





The combination of the spinal disc and the attached vertebral bodies is called a *spinal segment* or level. At each spinal segment, nerves branch from the spinal cord and pass through openings between the vertebrae called *foramen*. These nerves travel your arms and legs to control movement and relay sensation back to your brain.

WHAT IS *degenerative disc disease (DDD)?*

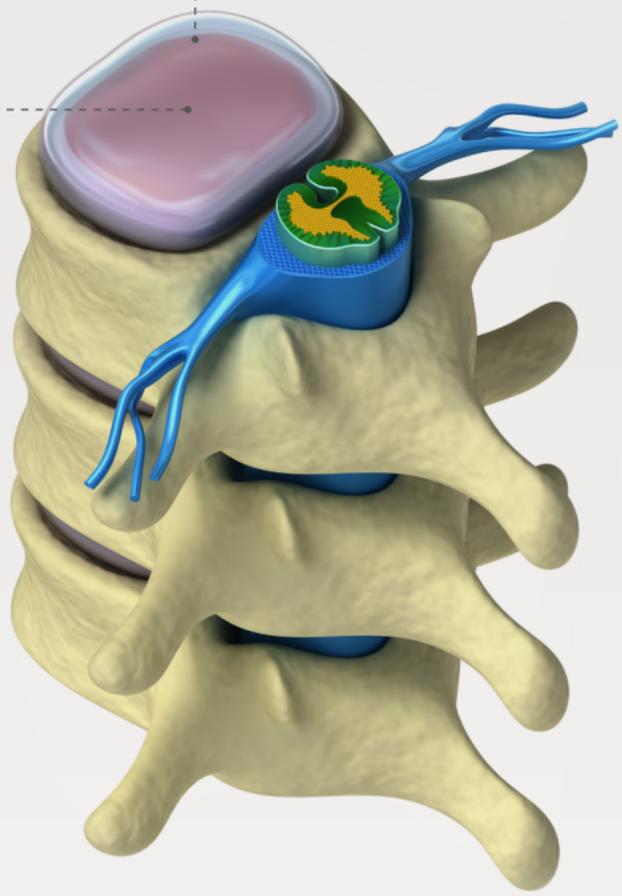
DDD isn't a disease at all

Your spinal discs act as a cushion to absorb shock between the vertebrae during movement. As a result of aging or injury, sometimes the spinal disc loses its cushioning effect which may result in a loss of disc height. This loss of disc height reduces the distance between the vertebral bodies and may cause irritation or pinching of the nerves resulting in neck and / or arm pain. The spinal disc may also bulge or herniate, where the disc material contained within the intervertebral disc is pushed into the spinal canal. This may result in inflammation and pressure on the local nerve.

DDD can cause more than neck pain

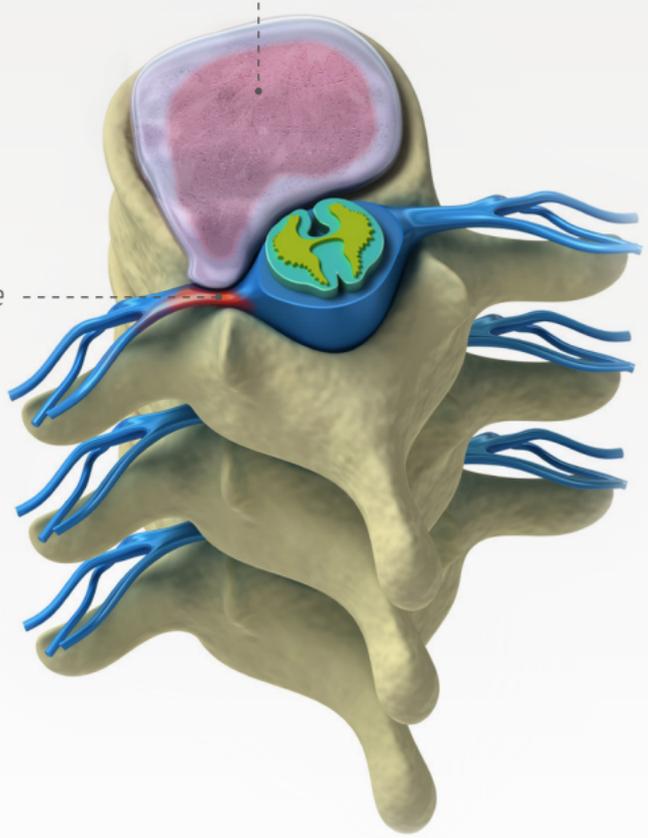
The aging of your disc can cause irritation or pinching of the nerves—leading to a combination of neck and / or arm pain, weakness, numbness, or tingling in your arms.

Healthy Disc
Disc Nucleus



Degenerative Disc

Nerve Pressure



WHAT ARE THE
options
FOR TREATING DDD?

*There are a number of
treatments available for DDD*



Your doctor will likely first use treatment options such as physical therapy, heat, and anti-inflammatory medications. For the vast majority of patients, neck pain will subside over time using these types of conservative methods.

Additional forms of treatment may become necessary—such as injections and nerve root blocks. If they are found to be effective, these treatments can be performed several times by a pain management physician or physiatrist. These injections work by decreasing inflammation and, ultimately, the pain of your irritated nerves.

If conservative forms of treatment fail to ultimately relieve your symptoms, then surgery may be presented as an option.



ARE THERE DIFFERENT *surgical options?*

What is Spinal Fusion?

The goal of surgical treatment is affording you relief from your pain. However, to achieve that outcome, stabilization with fusion of the spine is often necessary in order to eliminate the movement within the spinal column responsible for neck and arm pain and weakness.

Spinal fusion involves stopping all motion at the diseased segment by removing the spinal disc and inserting a device to allow bone growth between two vertebral bodies—essentially making two vertebral bodies into one.





What are my Spinal Fusion Options?

Spine surgery can be performed utilizing an anterior, or front, approach through an incision in the front of your neck. During spinal fusion surgery, the painful spinal disc is reached with caution. The spine may then be stabilized using a spacer implant that is covered by a metal plate that bridges the vertebral bodies.

Alternatively, your surgeon may utilize our more advanced technology—where a single device, **STALIF C**[®], replaces the disc portion of the damaged spinal segment. **STALIF C**[®] is then secured with 3 specially-designed screws.

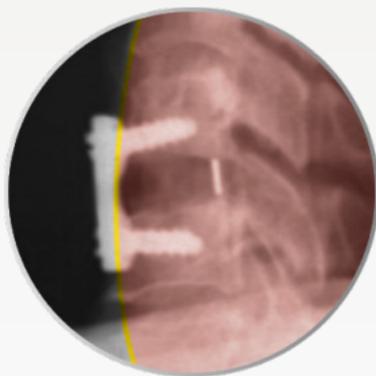
The procedure encourages fusion between the vertebrae above and below the affected spinal segment. This type of surgery generally requires less operative time, and more importantly, leaves all of the bones and muscles of the back of the neck intact. This may result in a shorter recovery time, allowing you to return to your daily activity more quickly.



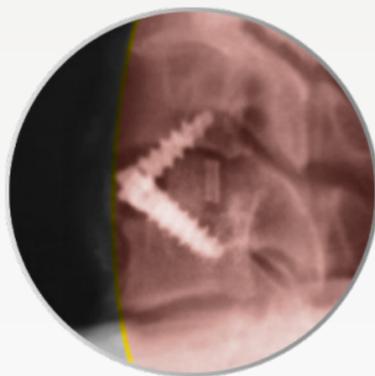
Is it right for you?

If you are diagnosed with DDD, your doctor will suggest the course of treatment he or she feels is right for you. The decision will be based on your history, physical exam, and findings on x-rays or other spinal imaging.

If the recommended treatment involves surgery, ask your doctor about STALIF®.



A traditional plate sits outside the confines of the vertebral body.

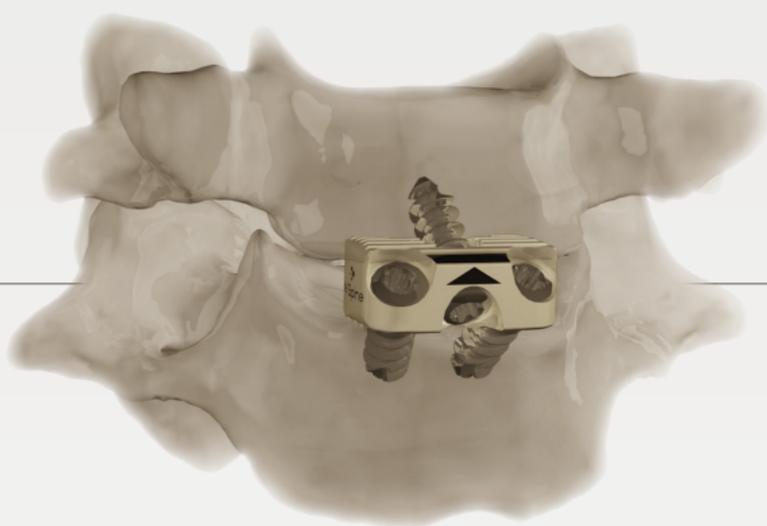


STALIF C® (featuring **INTEGRATED INTERBODY™** technology), conforms to the anatomy.

featuring

INTEGRATED INTERBODY™

Technology



Because this device is placed through the front of your neck, it may result in a shorter surgery, lower rate of complications and quicker recovery. With thousands of DDD patients worldwide having already received the successful and established **STALIF®** technology, the reported experiences have been extremely positive.

Only your doctor knows what's right for you. Remember to ask if **STALIF®** can be used as a part of your treatment plan.

AVAILABLE IN MULTIPLE *material options*

STALIF C[®] is available in multiple material options to meet each individual patient's needs. Your surgeon will discuss the best material option for you.

Available devices include:

STALIF C:

Anterior fusion device for the upper (cervical) spine (C2-T1), available in 3 material options (PEEK, PEEK with **Ti-ACTIVE**[™], and **FLX**[™])



STALIF C



STALIF C Ti



STALIF C FLX

PEEK

PEEK (polyetheretherketone) is a high-performance medical grade plastic.

Ti ACTIVE™

Ti-ACTIVE is a three-dimensional microporous commercially-pure titanium surface.

FLX™

FLX is a 3D-printed porous titanium alloy scaffold.

PEEK and **Ti-ACTIVE** implants also include Tantalum markers. All **STALIF** integrated fixation screws are made of titanium alloy. All materials used in the production of **STALIF** devices are highly biocompatible. Please consult with your doctor regarding any possible allergies.

Titanium has been shown to improve the characteristics of orthopedic and spinal implants. **STALIF C-Ti®** or **STALIF C FLX®** titanium technologies may further optimize opportunities for fusion.

WHAT ARE THE *potential risks* OF AN ACDF PROCEDURE?

Potential risks following ACDF surgery include:

- Infection
- Allergic reaction
- Nerve or spinal cord damage
- Blood vessel damage
- Problems with the graft or interbody device hardware
- Difficulty swallowing
- Hoarseness
- Ongoing pain



Following surgery, sometimes it is necessary to have Magnetic Resonance (MR) images taken. **STALIF C**, **STALIF C-Ti**, and **STALIF C FLX** systems have not been evaluated for safety and compatibility in the MR environment, nor have they been tested for heating or migration in the MR environment. Please consult with your doctor if you need an MRI following surgery, as scanning a patient who has these implanted devices may result in patient injury.

STALIF C, **STALIF C-Ti**, and **STALIF C FLX** systems are expected to have a clinical lifetime of 6 months, after which a bony fusion should be supporting the treated level.

This is not intended to be a full list of the possible complications associated with ACDF surgery, or with **STALIF** technology. Please consult with your doctor to discuss all potential risks.

about THIS GUIDE

This guide was developed and provided by **CENTINEL SPINE** and is designed to convey key information regarding the **STALIF C** device—the **INTEGRATED INTERBODY™** option your surgeon is considering to treat your condition.

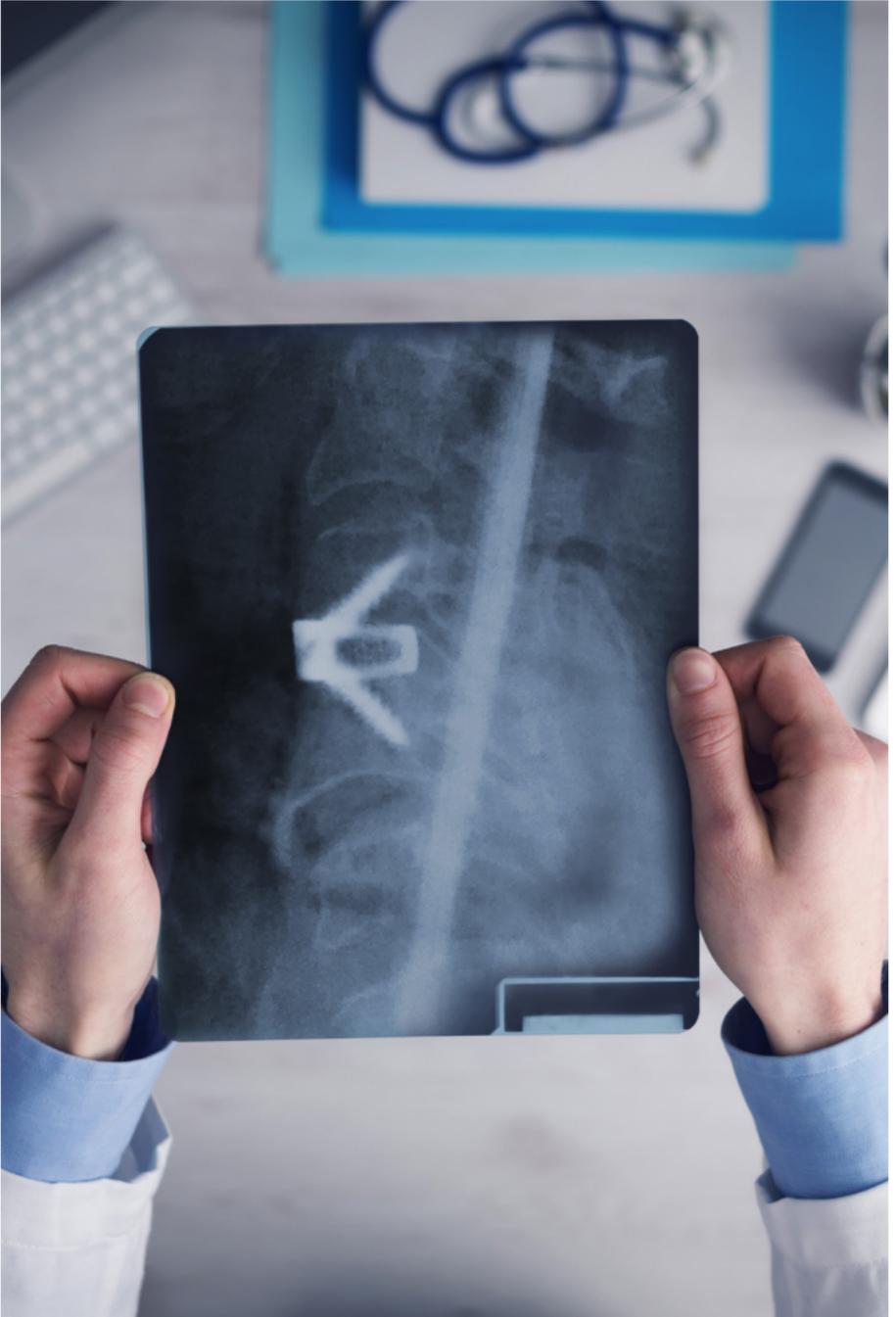
The guide is not intended to replace a conversation with your surgeon and only your surgeon is qualified to treat your spine and determine what is right for you.

Consult with your doctor for additional information regarding the most appropriate treatment for you—or if you have further questions about anterior cervical integrated interbody fusion surgery.

This guide was written with contributions from:

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For more information...

And to discover how our devices have helped others like you, please visit our online presence at:

www.rediscovermylife.org

About Us...

With a clinical history of 30+ years,

CENTINEL SPINE

has welcomed the challenge of making

surgeries more efficient, and thereby easier, on both patients and surgeons. Our engineers have developed distinguished technologies that realize the promise of efficient, simpler surgeries.



CENTINEL 
SPINE®

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