Life Spine®

e-LIF™

Expandable Lateral
Interbody Fusion

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e-LIF | Expandable Lateral Interbody Fusion

PATIENT INFORMATION

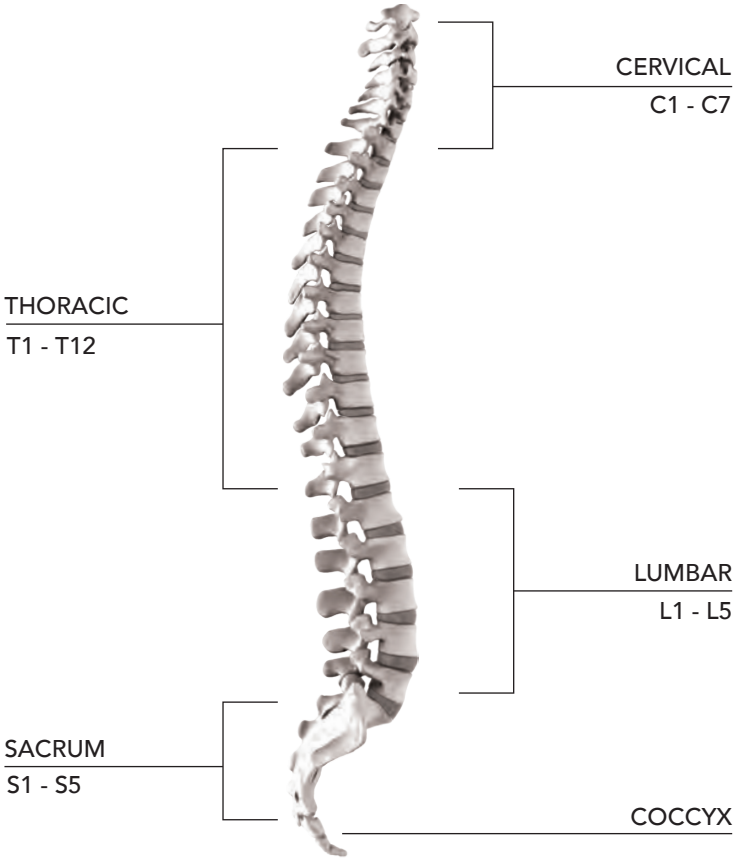
This brochure will help you understand more about:

- Anatomical features and conditions of the spine
- Information about surgical treatment of the lumbar spine
- e-LIF surgical approach
- What to expect before and after surgery

Receiving medical treatment is individualized to the patient's anatomy and symptoms. Information in the booklet may not apply to your condition, treatment, or outcome as surgical techniques vary with surgeon preference. It is important to discuss all options before you and your physician decide which treatment option is right for you.

This booklet is not intended as a replacement for professional medical care and meant only as an educational resource. Please consult your physician for clinical results and all other important medical information that pertains to this procedure.

SPINE ANATOMY

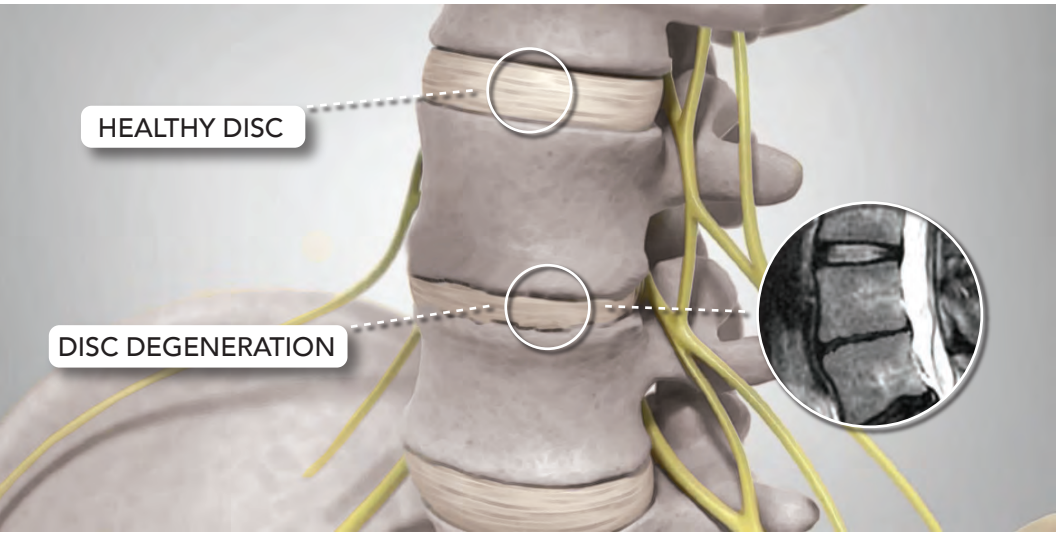


LUMBAR SPINE

The area of the spine in the lower back is known as the lumbar spine. It is made up of five vertebrae (L1-L5) and holds the majority of the body's weight. These vertebrae are connected by several joints, which allow the body to bend, twist, and lift. Discs separate each vertebra and are comprised of two parts, the Annulus Fibrosus & Nucleus Pulposus. These discs allow the spine to move, and also provide shock absorption.

GENERAL SPINE CONDITIONS

There are several primary causes of spine problems. The majority of the symptoms are caused by disc, bone, or ligaments pressing onto the nerve roots or spinal cord.



DEGENERATIVE DISC DISEASE (DDD)

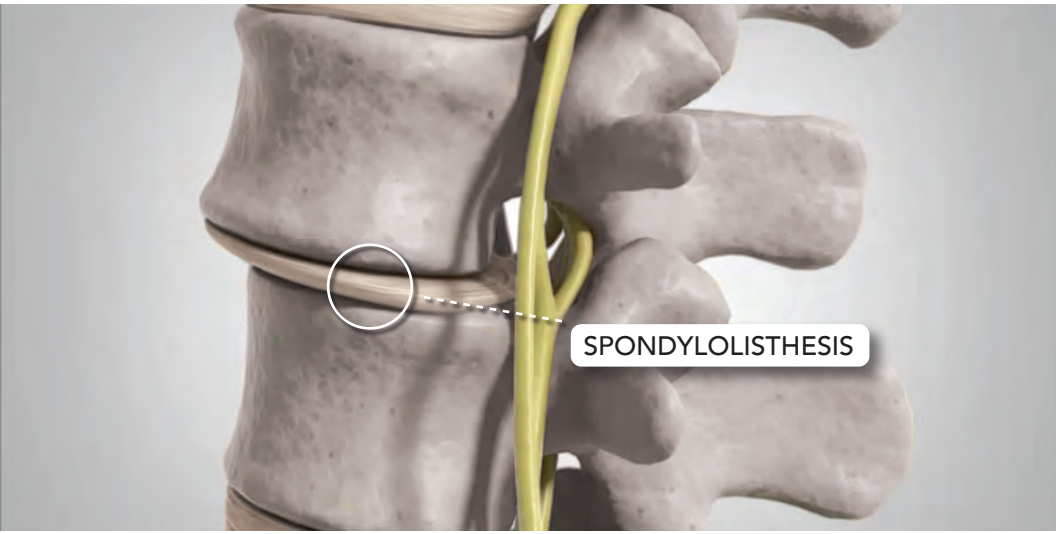
Degenerative disc disease is a weakening of one or more intervertebral discs, which normally act as a cushion between the vertebrae. This condition can develop as a natural part of the aging process or from a traumatic experience. Some people may experience pain, numbness or tingling in the legs. Pain may be worsened while bending, twisting or sitting. Lying down generally relieves pressure on the spine.

Symptoms of degenerative disc disease:

- Back, buttocks, or leg pain that is often worsened by moving
- Low back pain intensified by prolonged sitting or standing
- Pain radiating through the hips and into the legs

HERNIATED DISC

Degeneration or injury can cause cracks and tears in the outer layer of the intervertebral disc. The gel inside the disc can be forced out of these cracks and tears, causing the disc to bulge (protrusion), break open (extrusion), or break into pieces (sequestration), putting pressure on a nerve root or the spinal cord.



SPONDYLOLISTHESIS

Spondylolisthesis is a condition where one vertebrae slips forward over the vertebrae below it. This condition may develop as a natural part of the aging process, but it may also result from injury to the back. Some symptoms include low back pain, muscle spasms, thigh or leg pain, and weakness. Most people with spondylolisthesis do not experience any symptoms or pain.

Symptoms of spondylolisthesis:

- Lower back or buttocks pain
- Numbness or weakness in one or both legs
- Pain radiating down one or both legs due to pressure on nerves

TREATMENT

Often degenerative disc disease can be successfully treated without surgery. Physical therapy, chiropractic treatments, or anti-inflammatory medications may provide relief of these troubling symptoms. Surgery may be recommended if conservative treatment options do not provide relief within three months. There are many surgical options depending on the severity of degenerative disc disease.

WHAT IS e-LIF?

An e-LIF technique involves the surgeon treating the affected area of the spine through a minimally invasive and disruptive approach through the side of the body. The surgeon will do the entire procedure through an incision that can be as small as an inch in length. Through this incision the surgeon will be able to access the affected level by utilizing a specially designed retractor that helps improve visualization of the anatomy. Because the entire procedure is done on one side, an exposure of the anterior (front) or posterior (back) is not necessary, thereby potentially limiting the risk of vascular/neurovascular complications.

WHY e-LIF?

- Less invasive
- Minimized scarring
- Less potential blood loss
- May reduce hospital stay
- Potential faster recovery

WHAT IMPLANTS WILL BE USED?

Below are some examples of interbodys that may be used during your e-LIF procedure:

LONGBOW®

SENTRY™

WHAT WILL HAPPEN *BEFORE* SURGERY?

Your surgeon will discuss your treatment plan including any medications, physical therapy, or supportive assistance needed after the procedure. Your surgeon as well as the hospital will supply you with instructions on how to prepare for the surgery itself.

WHAT WILL BE DONE *DURING* SURGERY?

1 PREPARATION

Your surgeon will begin by having you lie down on the surgical table on a specific side depending on individual pathology. The table will then be positioned appropriately so that sufficient access can be gained as well as proper fluoroscopic imaging of the affected disc.

2 APPROACH

A small k-wire is placed through an incision and neuromonitoring sensors are attached to make sure nerves are avoided upon ignition entry. A sequential series of dilators are then used to slowly stretch the skin to allow for the retractor to be placed into the wound. This retractor will eventually be expanded to give the surgeon greater visibility of the anatomy.

3 DISC PREPARATION

The affected disc will then be removed to allow for a sufficient fusion of that particular level.

4 IMPLANT INSERTION

The appropriate size implant is chosen to fill up the space once occupied by the disc and is often times slightly larger in order to restore the appropriate disc height. This implant is often times filled with bone graft to help fusion occur.

5 SUPPLEMENTAL FIXATION

The surgeon will generally place some form of fixation in order to stabilize the device. Depending on the patient's condition and their unique pathology the surgeon will either apply fixation through the same incision or flip the patient over and apply posterior fixation.

IMPLANTATION VIEW

WHAT TO EXPECT *AFTER* SURGERY?

Patients usually require a stay of 1-2 days in the hospital. Your physician will discuss with you what is right for your particular case. The day after your surgery, your physician may instruct you to use a brace for a period of time to assist with the spinal fusion process. Supervised by trained medical professionals, your physician may ask you to carefully sit, stand, or walk within 24 hours of the surgery. Once you are discharged from the hospital, it is important to limit your activities for a period of time (determined by your healthcare provider) to give your body a chance to heal. Your physician will discuss with you any pain medications to take home, as well as a prescribed program of activities. Your physician will provide instructions on wound care, exercises, and limitations to postoperative activity.

FREQUENTLY ASKED QUESTIONS

CAN I SHOWER AFTER SURGERY?

Ask your physician as to any showering restrictions that may apply to your particular situation.

WILL I HAVE A SCAR?

Ask your physician to discuss the incisions made during the procedure, small scars at the surgical sight are common.

WHEN CAN I DRIVE?

You may be asked to refrain from driving for a period of time after the surgery. Your physician will instruct you as to when you can drive again.

CAN I TRAVEL?

Be aware that metal implants may be used in your procedure and could possibly activate a metal detector. Ask your physician to provide a patient identification form.

WHEN WILL I BE ABLE TO RETURN TO WORK?

Individual recovery time will vary. Other factors such as individual job duties and physical requirements will apply. Consult your physician for specific recommendations.

HOW LONG WILL I HAVE RESTRICTED ACTIVITIES?

You can expect to have activities limited in a period usually reaching 6 months post operation. Your physician will give you specific instructions related to restricted activity.

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