

AN INTRODUCTION TO

POSTERIOR FIXATION | FOR THE THORACOLUMBAR SPINE

This booklet is designed to inform you about posterior fixation procedure options for the thoracolumbar spine. It is not meant to replace any personal conversations that you might wish to have with your physician or other member of your healthcare team.

Not all the information here will apply to your individual treatment or its outcome. The information is intended to answer some of your questions and serve as a stimulus for you to ask appropriate questions about the procedure.



About the Thoracolumbar Spine

The thoracolumbar spine is made up of 17 bones, called vertebrae. Twelve vertebrae make up the thoracic (or chest) spine, and five vertebrae make up the lumbar (lower back) spine. The sacrum consists of five fused segments, and connects with the last lumbar vertebra and laterally with the pelvic bones.

Between the vertebrae are discs which provide the cushion necessary for spinal rotation and bending. These are called intervertebral discs. Each disc is comprised of two parts, a tough and fibrous outer layer (annulus fibrosis), and a soft, gelatinous center (nucleus pulposus). These two parts work in conjunction to allow the spine to bend, twist, and also provide shock absorption.



ZONE OF SPINE FOR THORACOLUMBAR SURGERIES

What is causing my pain?

There are several possible causes of spine problems. The most frequent symptoms are caused by either instability or by disc, bone, or ligaments pressing onto the nerve roots or spinal cord.

Some causes may include acute and chronic instabilities or deformities of the spine:

- Degenerative disc disease (DDD)
- Spinal stenosis
- Spondylolisthesis
- Spinal deformities
- Fracture
- Pseudarthrosis
- Tumor resection
- Trauma
- Failed previous fusion



What are my treatment options?

Many of the symptoms may be treated without surgery via methods that involve medication, rest, heat, and physical therapy. It is important that you speak to your physician about the best options for you.

If your symptoms do not improve with other methods, your physician may suggest spinal surgery. Surgery is reserved for those who do not gain relief from non-operative forms of treatment, patients whose symptoms are increasing or worsening, and patients that present with a spinal condition that indicates the need for surgery.

What is posterior fixation for the thoracolumbar spine?

Posterior fixation for the thoracolumbar spine is a procedure intended to provide realignment, immobilization, and stabilization of spinal segments in skeletally mature patients throughout the healing process, allowing fusion to occur.



Is posterior fixation right for me?

Your physician might determine posterior fixation is a good option for you if you require additional support for your interbody fusion procedure, are skeletally mature, and have gone through six weeks of non-surgical treatment. Interbody fusion is a surgical technique that attempts to eliminate instability in the back.

Conversely, your physician may determine that posterior fixation is not a good option for you if you are not a good candidate for fusion surgery in general due to other medical conditions. These conditions can be but are not limited to, signs of inflammation or infection near the operative site, patient sensitivity to implant materials, patients with inadequate bone quality, and other indications.

BEFORE

DURING

AFTER

What can I expect...?

Before surgery

Your physician will review your condition and explain all of your treatment options, including medications, physical therapy, and other surgeries such as removal of the diseased disc, fusion, etc.

On the day of your surgery, you may be admitted to the hospital early in the morning. You shouldn't eat or drink anything after midnight the night before.

Once you have been admitted to the hospital, you will be taken to a pre-op room and prepared for surgery. This may include instruction about the surgery, cleansing of your surgical site, as well as instruction about the postoperative period.

What happens *during* surgery?

After you are sedated, positioned face down, and draped, an x-ray is taken of your spine to identify the location of the operative disc space.

**STEP
1**

APPROACH

MAS® (Maximum Access Surgery)

Your surgeon will make a series of small incisions off to the side of the medial (middle) portion of your back. Probes connected to monitoring equipment are introduced into the small incisions to direct the safest path to the affected vertebral bodies. Once the safest path has been optimized, your surgeon will then be ready to decompress the affected areas.

OPEN

Your surgeon will make an incision on the mid-line posterior portion of your back. Tissue is then retracted, or pulled back laterally to expose the affected vertebral bodies. Once the exposure is complete your surgeon will then be ready to decompress the affected areas.

**STEP
2**

DECOMPRESSION

Your surgeon may then choose to remove or decompress portions of the vertebrae and discs. Decompression may be necessary because the original pain of the pathology is usually due to a compression of nerves roots or spinal cord. With severe injuries, it may be necessary to remove large portions of the affected anatomy.



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BEFORE

DURING

AFTER

STEP 3 STABILIZATION OR FIXATION

Your surgeon will then use screws and rods to stabilize or fixate the affected vertebral bodies. The combination of screws and rods act as an internal brace or stabilization device to help hold everything in place. Your surgeon will determine the appropriate use of fixation implants during the procedure.

STEP 4 FUSION

Your surgeon will then tighten and lock down the construct (combination of screws and rods), which will allow the affected vertebral bodies to fuse. This means the bone will grow around the affected areas and heal. This can take various lengths of time depending on the severity of the pathology. The area will eventually stabilize itself once fusion has occurred.

What implants are used?

Below are some examples of the implants that may be used in your posterior fixation procedure:

Screws and Rods



BEFORE

DURING

AFTER

What can I expect...?

After surgery

After surgery you will wake up in the recovery room, where your vital signs will be monitored and your immediate postoperative condition will be carefully observed. Most patients stay in the recovery room between one and three hours after surgery. Once the medical staff feels that you are doing well, you will be returned to your room in the hospital. It is normal for your incision to be sore immediately after surgery. The nursing staff will be checking to make sure that your vital signs are stable and that there is no problem with either the wound or nerve functions in your extremities.

Most patients who have undergone posterior fixation are discharged from the hospital within 1-2 days after surgery, but your physician will determine the best postoperative course for you. Your physician may instruct you to use a brace for a period of time to assist with the fusion process. Your physician may ask you to carefully sit, stand, or walk within 24 hours of the surgery under the supervision of trained professionals. 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.

Are there risks involved?

Keep in mind that all surgery presents risks and complications that are important to discuss with your physician prior to your surgery. Listening to your physician's guidance both before and after surgery will help to ensure the best possible outcome from your procedure.

Potential risks following a posterior fixation procedure may include: problems with anesthesia, infection, nerve damage, problems with the implants or hardware, and ongoing pain. This is not intended to be a complete list of the possible complications. Please contact your physician to discuss all potential risks.

Frequently asked questions

CAN I SHOWER AFTER SURGERY?

Depending on your surgical incision, you may have showering restrictions. Ask your physician for appropriate instructions.

WILL I HAVE A SCAR?

Ask your physician for more information as every patient is different.

WHEN CAN I DRIVE?

For a period of time after your surgery, you may be cautioned about activities such as driving. Your physician will tell you when you may drive again.

CAN I TRAVEL?

The implants used in a posterior fixation procedure may activate a metal detector. Because of increased airport security measures, please call your local airport authority before traveling to get information that might help you pass through security more quickly and easily. Ask your physician to provide a patient identification card.

Notes

RESOURCES

For more information about Posterior Fixation please visit:

www.nuvasive.com

If you would like to learn more about patient support and education for chronic back, leg, and neck pain sufferers and their loved ones, please visit:

www.thebetterwayback.org

If you have any questions about posterior fixation or spine surgery in general, please call or see your physician, who is the only one qualified to diagnose and treat your spinal condition. This patient information brochure is not a replacement for professional medical advice.

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7475 Lusk Blvd., San Diego, CA 92121 Tel: 800.475.9131 Fax: 800.475.9134

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