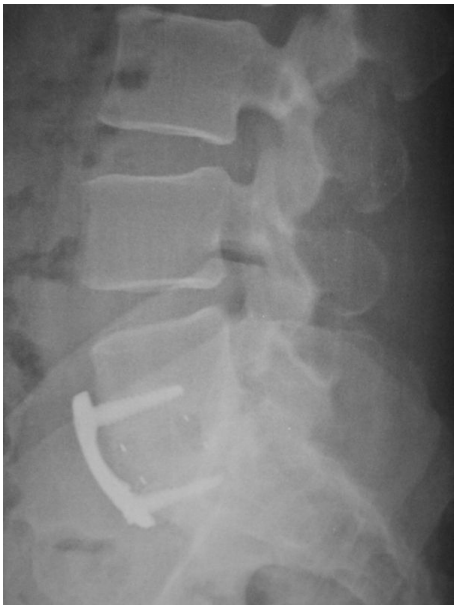
SpineFAQs Anterior Lumbar Fusion

Lumbar disc degeneration is commonly seen as we age. In some people, the degeneration of the discs can become painful. Occasionally the pain is so bad that people undergo surgery to try to alleviate their pain, and become more functional.

What is Anterior Lumbar Fusion?

The spine is made up of a stack of bones (called vertebra) and discs (which are the rubbery shock absorbers of the spine). The discs of the lower back are found in the front of the spine and are actually more easily approached from the front. When someone is diagnosed with lumbar disc degeneration, and surgery is recommended, anterior lumbar fusion is one approach to correcting the problem. Basically the plan is to remove the worn out disc, and either fuse the bones together, or more recently, replace the disc with an artificial disc replacement. The gold standard, however remains fusion.

Tell me about the surgery?



As opposed to the majority of surgeries for the lower back, this type of surgery approaches the spine from the front, through the abdomen. Surprisingly this is a very easy path to the spine. I always have a general or vascular surgeon make the approach to the spine. These surgeons are very familiar with the anatomy (since they are in the area every day), and therefore will decrease the risk of the surgery significantly. The incision is either made horizontally across the lower belly, or vertically to the left of the belly button. After splitting the muscle, the intestines and contents of the belly are moved to the side. The big arteries, veins, nerves and ureters (the tubes that drain the kidneys to the bladder) are carefully moved out of the way.

Now it is my turn. Once I get an X-Ray to make sure we are at the right location, I scrape the entire disc out from between the bones. Once completely removed, I will place a hollow spacer or cage (either made of bone, plastic or metal) between the bones to keep them stable. I fill the hollow center with bone and material that encourages bone growth so the vertebra can fuse together. I will also place a metal plate and screws across the disc space into the bones in order to stiffen things up. The wound is then closed.

What are the risks of surgery?

Other than the typical medical risks of any operation, Anterior Lumbar Fusion surgery has some specific risks.

- **Infection** – This is a rare complication. Most of the time an infection can be treated with antibiotics.
- **Bleeding, sometimes severe** – The major blood vessels (arteries and veins) to the legs from the heart need to be moved out of the way to do this surgery. Sometimes these structures can be injured which can lead to severe blood loss. Fortunately this is very rare. The surgeon I use to approach the spine is skilled in protecting the blood vessels, and can repair them if damaged. Sometimes the blood loss can be so bad that a blood transfusion is necessary.
- **Damage to the nerves** – This too is uncommon. Occasionally, when we remove the disc, and place the spacer, we can stretch the nerves some. This can lead to leg pain and tingling in some patients. More often than not this will resolve in several months after surgery.
- **Damage to other structures** – The abdomen contains the bladder, the intestines, the kidneys, and the tubes that drain the kidneys to the bladder. While it is possible to damage any of these structures during surgery, it is extremely rare.
- **Retrograde ejaculation** – In a fertile man, it is possible to damage the nerves that control the flow of semen during an orgasm. If this happens, it can cause the semen to flow backwards into the bladder, rather than out the penis as is normal. This can lead to infertility (the inability to conceive). Sometimes men consider saving sperm in a sperm bank if they are concerned and want to have children in the future. We are very careful to avoid injuring the nerves that control this part of the male anatomy, and

fortunately this is extremely rare. Unfortunately, if it happens, it is not reversible. Impotence is generally not a problem.

- **Adjacent segment deterioration** – Since we are not installing a new spine, but rather fusing the existing spine, it is possible that as you continue to age, the levels above the fused disc can wear out and cause problems. Sometimes this can lead to further surgery.
- **Failure to achieve fusion** – The process of fusion actually is a bit of trickery. We are trying to convince the body that it has a broken bone and signal it to grow bone. Sometimes this fails to occur. If this happens, there may still be some motion at the levels that did not fuse, which can lead to pain, loosening or breakage of the hardware, and in some cases, repeat surgery.

What about recovery?

We encourage people to be out of bed and walking the day of surgery. Most people are pretty sore in their belly for several weeks as the muscles heal. It usually takes several days for the intestines to "wake up" after this surgery, before you are able to have a bowel movement. Therefore, it takes several days before you are discharged. Fusion takes 3-6 months to become solid, but generally people can and do return to their more normal activities much sooner. Office workers, and the like are usually able to return to work within 4-6 weeks. Laborers take longer, usually 3-4 months. It is rare that people need a brace or physical therapy after surgery.