

Western Neurosurgery Review

****Special Edition Newsletter****

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CHARITÉ Artificial Disc

Western Regional Center for Brain and Spine Surgery are amongst the first surgeons in Nevada to offer this revolutionary FDA approved treatment for low back pain. The CHARITÉ Artificial Disc is the world's first alternative to lumbar spinal fusion surgery that has unparalleled long-term clinical history proving safety, efficacy and remarkable durability.

The CHARITÉ Artificial Disc was originally developed in Berlin, Germany in the mid 1980's. The CHARITÉ Artificial Disc was approved by the FDA in October 2004. IN addition to U.S. clinical trials, the CHARITÉ Artificial Disc has been available for over 17 years in more than 30 countries, and the overall results have been positive and appear to provide the intended benefits. The CHARITÉ Artificial Disc is the first and most clinically tested total disc replacement in the world.



CHARITÉ Artificial Disc (Photos courtesy of DePuy Spine)

In general, this is exceptionally exciting for spine surgeons in that individuals with mechanical discogenic source of pain have an alternative option other than fusion. In the past, individuals with severe back pain only had an option to trade this disabling pain for hopefully less pain with loss of lumbar motion. This is the first phase of spinal surgery which allows us the potential to maintain motion at an operative level and minimize postoperative complications. With the CHARITÉ Artificial Disc, we have in our armamentarium the ability to restore physiologic function for the first time. The study that the FDA approved was quite restrictive and undoubtedly one of the reasons why the results turned out so good. In general, the artificial disc would be restricted to young, healthy individuals with single level disease. There have been some more recent studies that have looked at two level disease, but this has not yet been approved by the FDA. These individuals should have minimal to no complaint of leg symptoms. In general, the leg symptoms are thought to be only due to foraminal compression and not due to sequestered disc fragment. While they may have had some minor minimally invasive surgery posteriorly, the posterior facet joints should be essentially intact should there not be any evidence of gross abnormal motion preoperative. There also should be no evidence of osteoporosis.

So far in the patients I have treated, they have required an overnight stay in the hospital. Their ability to return to work has been greatly **increased** from that of a fusion. The time in the hospital as well as the time required prior to returning to work has been greatly **reduced**. The results from the CHARITÉ Artificial Disc have been close to astounding. The CHARITÉ Artificial Disc is not a cure-all for

everyone; it is certainly for the young healthy patient with single level disease and should allow them to return to a full active lifestyle in a more rapid fashion.

XLIF (Extreme Lateral Interbody Infusion)

An estimated 10 million adults suffer from chronic back pain, a condition that can limit their activities. Many adults with back pain undergo traditional spine surgery, which can require months of recovery. Another minimally disruption procedure that is being performed to provide relief to those who suffer from back pain is the XLIF (Extreme Lateral Interbody Fusion). The XLIF procedure offers patients a safe and effective, less invasive alternative to traditional spine surgery. Unlike traditional back surgery, the XLIF surgery accesses the spine through the patient's side which avoids disruption to the tissues and major muscles in the back. Traditionally it takes about 6+ months to recover from back surgery, however, with the XLIF procedure, patients are often home within 24 hours and generally have a recovery time of 4-6 weeks.

The XLIF procedure utilizes a nerve monitoring system that has sensors to alert the surgeon when the probe is approaching one of the nerves running through the muscle so it can be steered around it. In addition, the incisions are about one-inch in size compared to the five-inch incision necessary with traditional back surgery. This then results in minimal tissue disruption and a decreased hospital stay and recovery time.

Minimally invasive and less invasive surgery minimize the damaging effects of large muscle dissection or retraction, and attempts to leave the body as naturally intact as it was prior to surgery. The goal is to achieve rapid recovery, lessen post-operative pain, and leave cosmetically satisfying incisional scars. Advantages can also include decreased pain and faster return to normal daily activities.

Both procedures, the CHARITÉ Artificial Disc and XLIF are currently being performed by Dr. William Smith, Neurosurgeon with the Western Regional Center for Brain and Spine Surgery.

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