

Minimally Invasive – A Sign of the Future

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Spinal fusion is a highly documented and proven form of treatment for many patients, but there is something you should know. There is a big difference between traditional spinal fusion and modern spinal fusion. Many innovations and advancements have been developed in the last few years that allow for improved fusion rates, shorter hospital stays and a more active and rapid recovery period. Modern spinal fusion involves using a bone morphogenetic protein (BMP), instead of taking a bone graft from the hip of the patient. BMP is a genetically produced protein with the ability to stimulate a patient's own bone cells to make more bone.

Surgeons have traditionally used an open approach to perform spinal fusion procedures, which involves making an incision along the middle of the back, stripping large bands of back muscles free from the spine, and retracting the muscles to each side of the opening so that the surgeons can view the spine and easily access the vertebrae for instrument implantation.

But modern spinal fusion can now be performed using less invasive techniques, making highly invasive posterior fusion unnecessary in many cases. Minimally invasive surgery often involves muscle dilation rather than muscle stripping.

Muscle dilation is achieved by using a series of sequential dilators to separate the fibers of the muscles in your back, making a small tunnel, giving the surgeon a view of your spine through a very small incision. By using these tubes, the surgeon can access the part of your spine where the problem is, without having to make a long incision along those spinal levels.

By allowing surgeons to operate through incisions less than an inch in length and to spare muscle by leaving it virtually intact, minimally invasive techniques can significantly reduce the pain, blood loss, and recovery time associated with traditional open surgery.

James J. Ronzo, D.O. is recognized as a leader in minimal access spine surgery. He has lectured on the subject nationally as well as internationally at conferences such as the International Spine Research and Innovation meeting in Nice, France. For several years, Dr. Ronzo has been sharing his expertise in the operating room with visiting spine surgeons from around the country. Running the cadaver laboratory in Tampa, Florida, he has mentored spine and neurosurgeons in the art of minimal access spine techniques in spinal fusions.

Dr. Ronzo studied the outcomes of 600 patients of which he has performed 1 to 4 level, lumbar fusions using this minimally invasive technique. **This group had a median age of 64.4 years.** The results were outstanding.

	Minimally Invasive Technique	Traditional
Avg. hospital stay	1.5 days	3.9 days
Avg. surgery time	117 minutes	240 minutes (approx)
Average blood loss	109 cc	255 cc

Of this same study group, the success fusion rate was 99% (2 patients were non-compliant with the doctor's orders, they were re-operated on and were successfully fused). Infection rate was nil. Average pain levels went from an 8 pre-op, to a 3 at six months post operative and many of the patients had no pain at all.

Based on these outcomes, there is no doubt that the Minimally Invasive Spine Surgery in the use of lumbar fusions *is* the future of spine surgery.

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