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Dr. Darren Bergey

Spinal Surgeon on
the Cutting Edge

Dr. Darren Bergey: Spinal Surgeon on the Cutting Edge

By Colleen Fliedner

When Dr. Darren Bergey explains his philosophy for performing spine surgery, he makes it sound easy. “First is identifying what I need to fix, then fixing it and then getting the patient back to his or her life as quickly as possible.”

Darren Bergey, M.D.



PHOTO BY TRAVIS HOEHNE

As they say, the devil is in the details, and those details are crucial when it comes to executing a successful spine procedure. If even the smallest component isn't perfect, the patient will likely continue suffering pain and may need another surgery. In fact, the reality is that a lot of patients come to him in need of revision surgery.

And what causes a failed back pain surgery? “It's possible that the patient didn't have the right diagnostic procedures done ahead of time. When that happens, everything that should be fixed doesn't always get fixed. That means that parts that are still painful were left out of the surgery,” he said. In other instances, the surgeon performed the appropriate surgery, but the patient's vertebrae didn't heal together properly.

Naturally, a second surgery is required to repair the problem. “That's why an integral part of surgery is doing the right tests ahead of time to identify the place to be operated on, and then doing the correct procedure for that problem.”

Dr. Bergey is originally from Alberta, Canada, and moved to Texas to attend college. Initially, he planned to become a heart surgeon, choosing one of the finest medical schools in the country: Loma Linda Medical Center. From there, it was onto the Mayo Clinic in Rochester, MN, for general surgical training. “My focus was in the area of transplants. But, I became interested in spinal surgery, came back to Loma Linda and got into orthopaedics,” he explained.

Receiving a fellowship at Cedars-Sinai Institute for Spinal Disorders, he worked with some of the world's finest spinal surgeons. “Dr. John J. Regan is the father of minimally invasive endoscopic spinal surgery, and I really wanted to work with him. He was the first surgeon to develop the technique for operating on the spine



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endoscopically either through the chest or the abdomen. Near the end of my training at Cedars-Sinai, a new minimally invasive retractor was introduced. It allowed us to make a 2-centimeter incision and then work through that incision in an open fashion to accomplish the same things we had been doing through three or four small portals with a camera on the other side.”

Under the tutelage of Dr. J. Patrick Johnson, Director of the Neurosurgical and Orthopedic Spine Fellowship at Cedars-Sinai, Dr. Bergey was trained in innovative, complex reconstructive techniques. He and Dr. Johnson co-wrote and published numerous studies, presenting them at medical conferences all over the world.

In December 2005, he opened the Bergey Spine Institute, Executive Medical and Surgical Associates, Inc. in Colton. Dr. Bergey selects the least invasive and most effective methods to treat spinal problems. “This helps reduce the patient’s pain, expedites recovery time and generally results in an earlier rehabilitation and return to the normal daily activities of the patient,” he stated.

Well over 65% of the nation’s population will suffer from back pain at some point in their lives. Back pain can result from any number of causes, including auto accidents, sports injuries, arthritis and age-related disc deterioration. The vast majority won’t require a surgical solution and will simply heal. But, if a patient’s pain becomes chronic, he or she generally visits the family physician. And when physical therapy and medications don’t alleviate the problem, they are referred to either a pain management doctor or a surgeon.

PAIN MANAGEMENT DOCTORS

Pain management doctors are often the intermediate step on a patient’s road to recovery. Not only do they treat the source of the pain with things like cortisone shots, they are specialists in the

diagnostic tests used to pinpoint the source of the pain, something that’s crucial to a spinal surgeon.

“I work hand in hand with pain management doctors for diagnosis and treatment options for patients. A good team of pain management doctors can give reliable results for diagnostic tests,” Dr. Bergey explained. “For instance, they can give injections to identify how much pain is coming from an arthritic joint. If they block the joint (a facet block) and that area gets numbed with morphine or zylcaine, and if it stays numb about four hours, and if 50-75% of the pain is gone during that time, it identifies that the pain is coming from that arthritic joint. That way, I can find the exact location of the problem in a patient’s spine and determine what treatment is needed.”

In addition, pain management doctors utilize a number of methods to help patients

either eliminate the need for spine surgery, or to put it off for an extended length of time. For instance, there’s a test in which an electronic device dampens the pain signals sent to the brain. It’s used to see if the pain the patient experiences in the limb have been decreased. If the device has actually reduced the pain, the spine surgeon performs a procedure whereby the device and a battery pack are permanently inserted into the patient’s spine.

CUTTING-EDGE DEVICES

For patients suffering from arthritis in their joints, stopping the

Dr. Bergey can do a very small surgery utilizing an X-Stop device, a titanium spacer that slips between the vertebrae, preventing that joint from rubbing on itself by literally jacking up the spine.





The ProDisc was introduced onto the marketplace. It has some different features, including a fin, or keel, that allows immediate stability of the implant, so it will never displace or shift position. The ProDisc has a cervical version that is almost identical to its lumbar counterpart. It has the beneficial keel component and utilizes a polyethylene spacer.

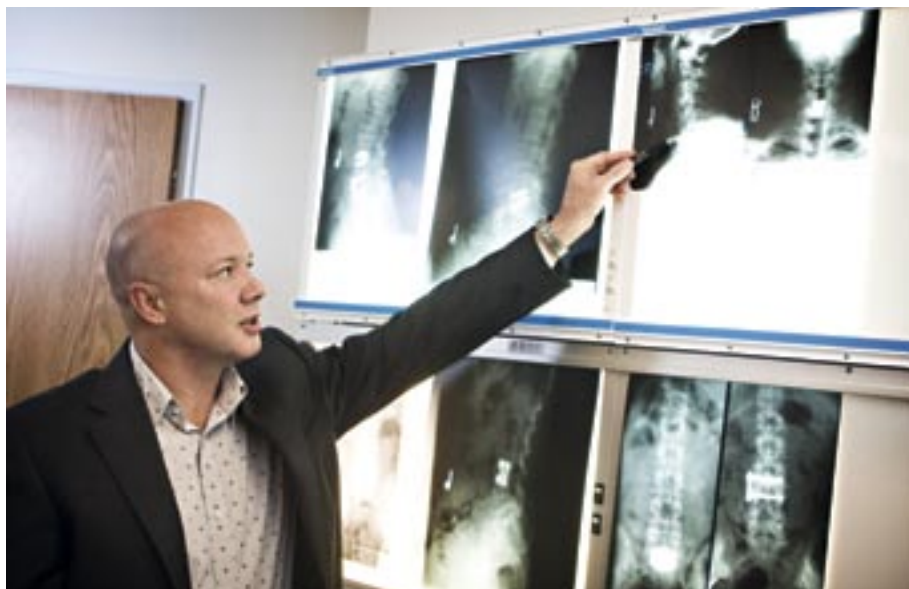


Dr. Bergey is one of a few chosen physicians to trial the Coflex. The Coflex is under a new FDA clinical research trial and functions as an interspinous U-shaped implant indicated for use in one- or two-level spinal stenosis.

motion of that arthritic joint is sometimes the only way to get rid of their pain. In the past, spine surgeons took out the painful, moveable disc, inserted a wedge of cadaver bone in its place and hoped the bone would grow together as a solid piece. Now, they replace that wedge with highly specialized plastic cages that are hollow, thus allowing bone to grow through them. Screws, plates or rods hold them in place as an internal brace, while the bone grows together.

A large number of patients, especially those who are over 60, suffer pain from arthritic facet joints, which wear out and cause referred pain in the back and buttocks. If an MRI exam and diagnostic tests shows that the pain is indeed coming from the facet, Dr. Bergey can do a very small surgery utilizing an X-Stop device, a titanium spacer that slips between the vertebrae, preventing that joint from rubbing on itself by literally jacking up the spine.

Well over 65% of the nation's population will suffer from back pain at some point in their lives. Back pain can result from any number of causes, including auto accidents, sports injuries, arthritis and age-related disc deterioration.



“With a one-hour procedure, I can fix both leg and back pain, if it’s coming from arthritic joints. The patient can go home the same day. If it’s an elderly patient, I might keep that person overnight. I’ve had patients tell me that 100% of their back pain is gone with this procedure.”

On the other hand, Dr. Bergey stresses that the amount of pain relief a patient should expect to experience postsurgery is based on their presurgery diagnostic test results. “If they come back and say that 75% of their pain went away when I had that facet blocked, then I tell them they should be able to expect that same kind of result using the X-Stop spacer.”

As one of only two surgeons in the area using the X-Stop in arthritic spine procedures, Dr. Bergey has had excellent results with his patients. One of the reasons he prefers using the X-Stop is be-

cause it leaves the patient with the option of having a bigger surgery in the future, should that patient continue to experience pain.

Thanks to new medical breakthroughs, patients suffering with back pain that isn’t caused by arthritis have a number of surgical choices. The latest techniques and devices permit surgeons to perform procedures to eliminate the pain and allow motion in the spine by use of a mechanical disc. “That was a big evolution in the spinal field. The FDA trials for the first artificial disc were completed about five years ago, and I was part of that trial at Cedars-Sinai.” The first mechanical disc, the Charite, allows the spine to rotate around the free-floating polyethylene spacer to continue the motion going.

Following that, the ProDisc was introduced onto the market place. It has some



different features, including a fin, or keel, that allows immediate stability of the implant, so it will never displace or shift position.

Prior to the release of the ProDisc, Dr. Bergey performed 40 very successful Charite implant insertions. Now, however, he exclusively uses the ProDisc, explaining that while none of his own patients have had problems with their Charite mechanical discs, one of the industry's biggest criticisms about this device is that they pop out of place. "I believe the ProDisc is a better design. And when it's done properly, there's an 80-90% success rate resolving a patient's back pain."

There are currently two types of cervical discs on the market. Both offer the same features as lumbar discs, i.e., the area isn't fused, the painful disc is removed and a mechanical disc that allows motion is inserted. One type of cervical disc, the Prestige, is indicated for a one-level problem, and it would be very difficult to utilize for two levels.

The ProDisc has a cervical version that is almost identical to its lumbar counterpart. It has the beneficial keel component and utilizes a polyethylene spacer. "Currently, I'm using the ProDisc in both the cervical and lumbar spine and have had great successes. For instance, I placed a cervical disc arthroplasty in a local police officer who had disabling neck and arm pain, and he was back to full duty on his job only two months after his surgery. He's a body builder and is working out again. He tells me he has



All photos: Dr. Bergey performing an anterior cervical fusion surgery



a complete absence of pain and doesn't take any pain medication."

Prior to the new procedures, this patient would have had a spinal fusion surgery. His recovery time would have been four months, which is twice as long as a nonfusion procedure.

Lumbar recovery is slightly longer, since the surgeon goes through the abdomen for the approach. "I had a fireman with a two-level lumbar disc replacement who was back fighting fires at three months," said Dr. Bergey. "That wouldn't have been the case if I had done a lumbar fusion. That would have required five to six months' recovery time."

Patients who can forego spinal fusions and have their problem discs replaced with mechanical ones will have a faster recovery time and won't have the future problems that patients who have had fusions experience. "We know that when we fuse a part of the spine, it eventually wears out the next one or two levels up. There's a 3% incidence every year of the next one or two levels wearing out each year," Dr. Bergey explained. "Over a 10-year period, there's about a 30% chance that the person with a fusion will require some other surgery on adjacent segments."

When using mechanical discs, those numbers are perhaps as low as a 1% incidence. Although the long-term effects on adjacent discs aren't known yet, spine specialists are certain that keeping the motion going actually decreases the stress on the next-level discs.

Of course, artificial discs don't solve everyone's problems. Some patients will also require a fusion, such as a person who has a combination of arthritis in one disc and an injury or deterioration in another. Dr. Bergey has performed hundreds of such procedures.

With his keen interest in research and development, Dr. Bergey has designed several implantable devices that are close to being released in the marketplace. "I'm working on a new version of the anterior instrumentation that will allow discs to collapse and heal on compression," Dr. Bergey explained.



Because of his excellent reputation, vast experience and positive results in both single and multilevel disc replacement, Dr. Bergey is viewed as one of the most skilled spine surgeons in Southern California.

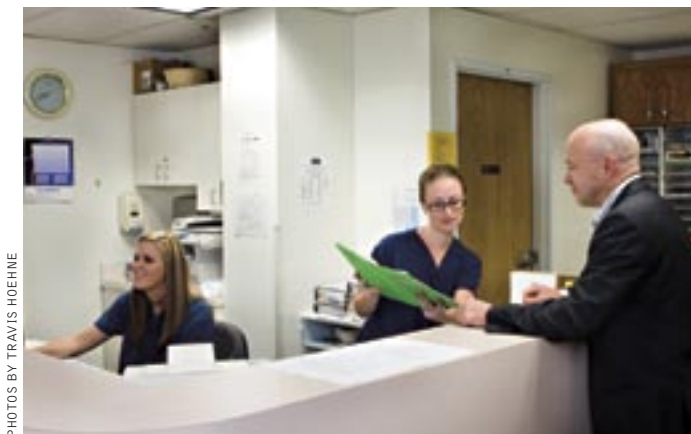
THE FUTURE OF SPINE SURGERY

For the millions of people who currently need spine surgery, and for those who will have to have one in the future, the news is very encouraging. "There are a lot of new things on the horizon, like a percutaneous screw used in procedures with herniated discs that will distract in the same fashion as the X-Stop," Dr. Bergey reported. "FDA trials are underway on a variety of different devices to replace the nucleus that will keep the disc from collapsing and developing painful degeneration in the future. We'll see those being brought out in the next year or two."

With his keen interest in research and development, he has designed several implantable devices that are close to being released in the market place. "I'm working on a new version of the anterior instrumentation that will allow discs to collapse and heal on compression," he explained. There will be new generations of mechanical discs, more outpatient procedures and fewer surgeries that are done through the front of the abdomen. Always at the forefront of the most recent technology, Dr. Bergey already uses the far less-invasive side incisions in certain procedures, stating that he believes this method will become more pervasive in coming years.

As one of the first 125 spine surgeons nationwide to use the ProDisc, he's a sought-after teacher in this and other innovative spine-surgery techniques. In fact, because of his excellent reputation, vast experience and positive results in both single and multilevel disc replacement, Dr. Bergey is viewed as one of the most skilled spine surgeons in Southern California.

For more information, contact Bergey Spine Institute, 900 E. Washington St. Ste. 100, Colton, CA 92324. Call (909) 824-2422, fax (909) 824-8234 or visit www.bergeysspine.com. ■



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