Neurosurgery One

What can you expect during spinal fusion recovery?: Video Transcript

Dr. McGowan (00:12):

My name is Jason McGowan. I'm a board certified neurosurgeon at Neurosurgery one, uh, specializing in complex spinal deformity and minimally invasive spine techniques. In my practice, I do a lot of complex spinal deformity and scoliosis surgeries. And the thing that I would like to talk to you about today is the recovery process and patient expectations.

(00:35):

You know, I think there's a lot of anxiety surrounding the surgical experience and the surgical conversation. Um, some of the things that we do here that are unique is that just because you have a radiographic, uh, concern for surgery, uh, we wanna work up all non-surgical options to begin with. I think that number one establishes a bit of a rapport with the patient to say, listen, this isn't someone who's pushing me immediately to surgery. Number two, it allows us to exhaust non-surgical options to make sure that we can't treat this in a more conservative manner. Uh, but once we get to the point of surgery, uh, there's certain things that we obviously can talk about and, and make, uh, clearer and clean up some of the misconceptions that are surrounding surgery, especially surgery related to spinal fusion.

(01:21):

So, scoliosis surgery, uh, in my hands, is a two-stage process. The reason we do that is we decrease the total operative time at one session for a patient. And we also have the ability to reconstruct the spine in a more natural way on a two staged approach. One done on say Monday, hypothetically, one done on a Wednesday. Initially, we perform an anterior or approach from the front, uh, to reach the lower spine and establish a solid foundation for fusion. That means that we're gonna remove this disc material at the bottom two levels and replace that with a large spacer. I use the word large on purpose, because the larger the spacer, the greater the surface area, the greater the surface area, the greater the rate of fusion. The greater the rate of fusion, the more likely you are to successfully receive the benefits of this surgery.

What happens during surgery? (02:10):

This surgery takes, on average about two and a half to three hours. Uh, then patients go back to the recovery room, up to their room, and they start their rehabilitative process. Um, at some delayed time, most likely 48 hours, you'll return to the operating room for the second stage of the surgery, which is the posterior component. The posterior approach is the traditional rods and screws that patients envision when they think of scoliosis surgery. In many scoliosis cases,

not only is this green or lumbar area of the spine, the low back involved, the thoracic spine or the rib bearing portion of the spine is also involved. And because we have to, uh, do such a large procedure by doing this in two stage, uh, fashion, we are decreasing your, your surgical time. On the larger day, we're decreasing the estimated blood loss that patients go through. And we know that this results in decreased length of stay and earlier return to function.

(03:07):

The biggest fear that patients have, how am I gonna be able to move after this? What is this pain gonna be like? How do I adjust to a new life after I've had surgery of this degree? Immediately after surgery, we have a well, um, studied postoperative pain program that does continuous medication through the IV, as well as intermittent medication that you can take by mouth. The idea is that we're getting ahead of this pain curve so that you're not an excruciating pain while you're recovering. We have studies that show this makes a significant impact. And anecdotally, we see this in our patients all the time. We, we get you up the very next day with physical therapy. We know that early mobilization is associated with less postoperative complications, uh, which can include everything from incisional issues to, um, other, uh, more complex, uh, postoperative complications.

(03:55):

We're having you work with therapy so that you can learn proper techniques, um, as you're continue to recover and long term. You know, folks get back to many of the activities that they've, they've enjoyed before and they haven't been able to enjoy because their back pain has progressed. Uh, we're gonna put the following restrictions on our patients. No BLTs, no bending, no lifting, no twisting. So that lifting limit is about 20 pounds. Uh, the idea of bending and lifting, we just wanna allow everything to heal well and for this new hardware to fully incorporate, uh, into the patient's body. Uh, and we know that with these restrictions, uh, we see maximum success. Um, your first four weeks are gonna be sort of light duty, low impact, low energy exercising, so walking is fine. Um, upright stationary bike is okay. Uh, even treadmill, uh, activities are also fine as you continue to build your endurance. Uh, around week four, we'll do a, our first postoperative visit. Make sure that your x-rays look good, make sure that you're doing well, that your incision has healed. Then we'll start you on formal physical therapy where you're starting to increase your weight load. You're starting to increase that physical activity working back towards your normal around three months after surgery. I, I tell my patients to live life mindfully, as if they've never had this before, and to continue back towards, uh, the activities that they love.

(05:18):

So, I think one of the best things we can do as scoliosis surgeons is to set realistic expectations. The idea of patients being pain free after surgery, is that an idea that I don't really, uh, set my patients up to expect after surgery? But the idea is that through our conservative measures, uh,

we can identify how you respond to certain injections, how they make you feel, even if for just a short time. And that can be a predictor as to how you'll feel. Uh, postoperatively, postoperative pain is something that immediately is going to feel different. You know, these are patients that you've just undergone a large procedure. Uh, but we have medications involved. We like to mobilize early because we know that we have the pharmacy, uh, within our hospital walls that can really combat pain, uh, aggressively. The best patients for scoliosis are those that have, uh, debilitating pain, that are impacting their activities of daily living, that are really having an impact on the way they live.

(06:11):

Just because you have, uh, uh, evidence of scoliosis, uh, does not mean that you need a scoliosis surgery. It's the fact that it's affecting your ability to interact with your grandchildren, to do the gardening activities that you love to, to walk, to hike, all the things that our patients love to do here, uh, Colorado. Uh, and I think that it's important for us to identify those patients that have tried physical therapy, that have tried injections, and they continue to progress. Those are the ones that we can make an impact on. When I had that conversation with what to expect from before surgery to after surgery, my goal is if I can get you 50% reduction of your pain, is that significant? And if the answer is yes, then we, we can talk about a more formal conversation regarding surgery. We likely exceed that 50% reduction rate, but that's sort of the baseline at which we set, uh, our, our goals and expectations postoperatively. So if a patient reports, they have a seven or eight out of 10 pain, we're looking at a three and a half to four out of 10 pain postoperatively once the healing is done.

What can I expect after surgery ?(07:15):

So after scoliosis surgery, our patients tend to stay in the hospital for three to five days. Um, during that time, we have both IV medication medication that goes through the, uh, intravenous ports, as well as medications you can take by mouth by the time you're ready to go home. Patients are on medications that you take by mouth only because we don't have IV access at home. The average scoliosis patient is on their pain medicine for two to four weeks after surgery. Most people do not require, um, prescription pain medication. They can rely on over-the-counter medications like Tylenol. It's, it's a very important thing for us as spine surgeons to ensure that we're not, um, setting our patients up for addiction or narcotic overuse. Because of this and, and with our practice after four weeks or 30 days after surgery, we have a close relationship with pain. Me, pain medicine, uh, we will refer you to them if you're still requiring pain meds after that. So we can put a taper and plan that's organized and controlled by medical doctors.

Do I need a brace after surgery? (08:18):

So, bracing after spine surgery is still one of the bigger controversies, uh, and neurosurgery and orthopedic surgery. Um, there's a movement away from bracing in appropriate patients, uh,

because bracing allows the natural muscles that provide our postural support to take a bit of a vacation. So imagine if your strength is here when you start your surgery, I put you in a brace for four to six weeks. Those muscles are on vacation. They lose their strength when you start rehab. You have to work up just to get back to your baseline. If I keep you out of the brace, allow you to use your natural core muscles to support your spine. Those muscles are engaged the entire time. Then when you start therapy, you're working to get stronger than you were at baseline. So in patients that don't smoke or patients that don't have osteoporosis or other, uh, conditions that we know and impact and inhibit bone fusion, uh, I elect not to brace those patients and certain patients, however, I will use a brace.

When will I be able to get back to activities after surgery? (09:15):

Bedrest after spine surgery in general, and especially scoliosis surgery is, is frowned upon. Uh, we like to get our patients up very early. Early mobilization is noted to decrease their postoperative complication rates as well as decrease your return to work time. So, uh, we want to increase the functionality of our patients immediately. So postoperative day one, we're getting you out of bed. If your surgery's are Monday, the expectation is on Tuesday, you're working with physical therapy out of the bed. We will work with therapy every day that you're in the hospital. And we will determine with the assistance of our physical therapy experts, whether or not you need to, uh, seek some outpatient therapy, some inpatient rehab for a day or two, or if you're good to go home and be safe, uh, doing your activities of daily living.

(09:58):

When it comes to walking after surgery, um, we first wanna make sure you're safe and obviously that you have gait stability. Uh, once that's cleared by our therapies, uh, we encourage you to walk as much as possible. Uh, I tend to set the expectation of walking to the end of the property line, then walking to the end of the block, then walking to the end of the neighborhood as you build your endurance as sort of goals. Uh, but there is no sort of prescription in terms of how much or how little you should walk. It's really listening to your body, uh, and then slowly progressing as time goes on.

(10:32):

So returning to, um, daily activities after scoliosis surgery is one of the biggest things that patients, uh, always ask about ahead of surgery. Um, we recommend that obviously you be off of all narcotics ahead of, uh, the attempt to return to driving. Uh, I always tell my patients pick either early Sunday morning or late Sunday evening, find a wide open parking lot where you can recreate a lot of driving scenarios, looking over your shoulder, uh, to reverse, uh, looking over your shoulder to change lanes. Uh, and when you feel comfortable, we will allow you to return to driving. And, you know, if, if you asked to estimate, I would say most folks are returning around two to four weeks after their surgery. Other activities that are more involved, uh, we're

gonna be a little bit more cautious in terms of returning to, uh, so return to work can coincide with return to driving in many cases as well because you're off your narcotics.

(11:22):

Um, and also your pain is, tends to be well controlled, so you're able to think clearly. Uh, but more, more things related to my Colorado patients skiing, golfing, um, hiking. We, we will take it on an individual basis, but in general, we want to see a CT scan at six months to see early formation of fusion. As long as we see that formation at fusion at six months, we can make a decision as to which activities are okay to return to. So for my avid golfers, I always tell them, chipping and putting around three months full swing around six months after we get that CT scan. Uh, for folks that want to ski and, and, and snowboard, depending on how aggressive you are, we can talk about that return date. Uh, but certainly it is possible and I anticipate that, you know, at a year's time, you're back to everything that it is you love to do.

What steps should I take before surgery? (12:14):

So one of the new waves of patient care related to scoliosis and scoliosis surgery is the concept of prehab. So that's prehabilitation, uh, pre-hab, uh, where we're getting you in with physical therapists ahead of your surgery. We're giving you core exercises to strengthen your, uh, core posture anteriorly, as well as the spinal, uh, muscles that support you posteriorly. One of the, the best things that patients with scoliosis can do is walking laps in the shallow end of a pool. There's resistance from the water and you're not carrying as much of a load due to the buoyancy. Uh, so we, we really encourage patients to do that. We encourage patients to see physical therapists ahead of time, get their core strengthening exercises as a routine so that when you come into surgery, you're optimized for a better outcome. There are certain conditions that patients carry, uh, coming into scoliosis surgery that we like to optimize before surgery.

(13:06):

This may result in a delay in your surgical date. But the idea is that if we get this dialed in ahead of time, we can eliminate or reduce the likelihood of complications after surgery. Diabetes is one of those. Blood glucose control is very important in terms of, uh, wound healing as well as bony fusion. Uh, so we will look at your A1C levels. If those A1C levels are elevated, we're going to recommend that we get your blood glucose under control prior to, uh, proceeding with surgery. Other things include smoking cessation. So, we know that patients that smoke tend to do worse with spine surgery, especially surgery related to fusion. Uh, this can impact boney fusion as well as wound healing additionally. So, uh, smoking cessation for a minimum of four weeks ahead of surgery is, is recommended as well as four weeks after surgery. I tell my patients, if you can be off, uh, nicotine and you can sort of, uh, move beyond that nicotine dependence for a total of eight weeks, you can continue forward for extended period of time.

(14:02):

We work together to get to that point because we know that smoking impacts your health in so many ways, let alone just spine surgery. Uh, and then finally, it's the concern is where you are in terms of pain control. We know that the reason patients need scoliosis surgeries is because their pain continues to get worse, uh, and it is something that impacts their ability to, uh, function on a daily level. But we also know that if we can reduce the level of, uh, opioids and morphine equivalences ahead of your surgery, patients will respond better to the pain medications afterwards in your pain profile will be decreased with respect to those that are on high dosages ahead. So we, again, work in, uh, in continuity in conjunction with our pain medicine doctors to come together with a regimen that will allow you to decrease your preoperative medication load and optimize your postoperative treatment plan.

Dr. McGowan (14:59):

Bending after surgery is a big concern. A lot of our patients, um, and I always counsel my, my, my patients in the office. Imagine trying to bend in the middle portion of your spine or the thoracic spine, which in this case is blue. It's very difficult to do because the thoracic portion of the spine is the rib bearing portion of the spine. You have a 360-degree rib cage that prevents us from a lot of mo of movement. So, this is not a very mobile segment of our spines. Naturally. This in contrast to the lumbar spine, uh, is a very mobile segment of our, our spine. Uh, and this allows us to do lots of different motions. With the lumbar spine, we have flexion, we have extension, we have rotation, we have lateral bending. Uh, so all these axes of motion are possible with the lumbar spine.

(15:46):

After spine surgery, you still will have flexion and extension. We can compensate by using the hips to, uh, assist with that. And you'll also have the ability to rotate to a certain degree because a lot of rotation that we actually do in life is through the neck or the purple portion of the spine. Um, so what do you lose? You lose a little bit of lateral bending. So that's the concept of moving side to side in this manner. Um, but when we look at our patients and preoperative as a part of our workup, we do lateral bending, scoliosis films. A lot of patients with scoliosis don't have a lot of their lateral bending left just by the disease process itself. So, each patient's going to be a little bit different in terms of their range of motion after surgery, but it's something that we can discuss and predict ahead of time.