

# Starting Strength

## From Crutches to Deadlifts: Back Rehab 101

by

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Would you believe us if we told you that one of our clients went from barely being able to walk without crutches or drugs to squatting in the low 200s, deadlifting in the mid 200s, pressing and benching in just 6 weeks? Maybe not. But this is *exactly* what happened. And it is not as rare as you may think.

Scott joined us in July of 2017. He was a beat up “meathead” with many years of lifting under his belt, including an assortment of aches, pains and training injuries. The bench press was his favorite lift, having benched over 315 while only recently getting his squat to 225. He wasn’t happy training at the local commercial gym as they really were not pleased with his deadlifting. More importantly, he wanted to make sure he was doing the lifts correctly (surprise, surprise: he was not) and he decided it was time to get some coaching.

After about a month of steady progress, Scott noticed that several nagging injuries that he had developed over the years had started to resolve thanks to better technique in the barbell lifts. For instance, he had had left knee pain for several years, but it subsided once he had completed a couple weeks of his novice linear progression. Perhaps more significantly, right wrist pain (for which he was wearing a splint on a daily basis) completely resolved after only a few days.

### **And Then One Day...**

Two days after an uneventful training session, Scott developed back pain. His wife suggested he visit an urgent care center. He underwent X-rays and received a prescription for narcotic analgesics, NSAIDs, and a non-sedative muscle relaxer. No other treatment or intervention was recommended at the time of discharge. At this point, Scott was sitting, walking, and lying down with only moderate discomfort, so he was hopeful the medications would allow him to make his planned trip to Europe two days later. Unfortunately, an excruciating crawl to the bathroom that same night revealed the problem was getting worse. They decided to cancel their vacation and returned to the urgent care center the following morning. We were unaware of this until about a week and a half later when he emailed us to say that he had been in the hospital.

Scott received wheelchair assistance at the urgent care center, but maintaining a seated posture caused excruciating pain. A physician assistant administered a shot of Demerol and recommended

ambulance transport to a nearby emergency department for an MRI study. He and his wife stayed in the ER most of the day; however, since he did not have any incontinence or similar symptoms, no MRI or further treatment was suggested (aside from a more potent muscle relaxer and a steroid to reduce inflammation).

Two days later, he was able to consult with an orthopedic surgeon, who facilitated admission to the hospital for an MRI. Scott was diagnosed with sciatica and “gait dysfunction.” The MRI revealed the presence of a fairly sizable disc herniation at L4-L5 impressing upon the sciatic nerve root. He was also experiencing numbness and tingling in his right leg, foot, and toes. The orthopedist recommended surgery, but also provided the option to treat the symptoms conservatively and observe for a change in status. A physical therapy evaluation was undertaken to assess his ability to carry out functional activities, such as independent ambulation and stair climbing, during which Scott was shown some stretches geared toward release of the sciatic nerve. Not wishing to rush to surgery and the associated recovery process, Scott chose to go home and attempt a non-operative rehabilitation alternative.

## **The Facts About Back Pain**

A number of medical studies (see references) have reported poor correlation between back pain and findings in magnetic resonance imaging of the spine. Most people walk around pain-free not knowing that they have one or more herniated discs in their spine. While it is impossible to know this with certainty, given Scott’s history of lifting with poor form over many years, and previous episodes of back pain, it is likely that his L4-L5 herniation was from an old injury or degeneration. There was no obvious trigger to his pain on this occasion, and the onset did not correlate with a traumatic event but rather occurred two days after his last training session.

A few days after being released from the hospital, Scott returned for a follow-up evaluation with the orthopedic surgeon. The combination of muscle relaxers and anti-inflammatories had been effective enough to restore his ability to sit and move about, although he was still using crutches to assist with walking. The doctor agreed to hold off on surgery and pursue a conservative course of treatment. Later that same day, Scott e-mailed us to relate the events that had transpired, and to ask when we could talk about his training. This was the first time we learned anything about Scott’s situation. Up until that point we still thought he was on vacation in Europe.

Initially Scott was unsure that he would be able to come in by himself because he needed assistance with walking. But by the next day he was doing better and was able to come in using crutches. When he arrived, he was in pretty bad shape and in a great deal of pain. We sat down to talk, and immediately assured him that he was not alone. We told him that both of us, as well as many other people we know, have experienced similar pain. We helped him understand that he would be okay and that once the acute pain was gone, movement rather than rest was the proper prescription. Once he could walk without crutches, he needed to come in and “train.” We sent him several articles and educational material dealing with back pain, including some written by other Starting Strength coaches.

This was Tuesday, August 29. He had been in and out of the hospital since August 22 – eight days of complete agony. Scott would later tell us that he left the gym that day feeling extremely confident after speaking with us. Even though the memory of the pain and the immediate treatment was fresh in his mind, he was encouraged that the rehab and recovery process would be a success.

Several factors played into Scott’s ability to understand and get on board with what we told him that day. First, he was very apprehensive about taking any drastic measures to “fix” his spine, so

he felt that we were on the same page about not rushing into surgery. We expressed empathy and described the back injuries that we ourselves had gone through. This informed our confidence in using the program as a rehabilitative tool in lieu of aggressive surgical intervention. Second, Scott noticed that lifting under the supervision of coaches had resolved many of the nagging pains he had brought with him from previous lifting. Scott was familiar with Starting Strength, he understood the logic behind the novice linear progression, and was informed about physical therapy modalities. The simple design and rational basis of the Starting Strength novice program made more sense to him for rehabilitative purposes than the other alternatives.

## Our Approach

One week later, on September 5, Scott showed up for the first day of rehabilitation, without crutches but still with a pronounced limp. After a quick chat about how he was doing, we got down to business. First, we gave him yet another article that described the usual course of rehabilitation for the condition. Second, we showed him a handful of exercises to do that would help depressurize the posterior lumbar discs and the surrounding nerve roots.

As expected, the rehabilitation process was somewhat slow at first, and he continued to have a limping gait for at least a couple weeks. However, he never suffered any setbacks, potentially because we held him in check when he would try to rush the return to training. Scott continued to make steady progress, until he was completely asymptomatic (including full resolution of his lower extremity neurological deficits) within six weeks from the date he was admitted to the hospital.

We started with simple, basic movement, very similar to what he was shown at the hospital. Body weight squats to a box followed these exercises. We attempted to work on hinging, but this proved very painful. It would take Scott a good week or so before he was able to move his hands down his legs while moving his hips back, as if performing an unweighted Romanian deadlift. Once he could do this without too much discomfort, we moved to a dowel. Once the dowel became easy, Scott moved to the 15-lb training bar.

Weight was added to the bar over the next few sessions, from RDLs to deadlifts elevated on mats, to finally deadlifts from the floor. Within a few days of modified movement, Scott was performing weighted squats to a box (above parallel). We slowly started him back on presses, first very strictly, then when range of motion returned he resumed pressing more dynamically. Benching did not prove to be an issue at all and he returned to his heavy weights rather quickly. Chin ups were not an issue either. Because his symptoms were resolving with every training day, we slowly increased the weight and range of motion for the squat and deadlift, until Scott was able to take the box away and return to a linear progression for all lifts.

We were extremely picky with his form, especially on squats and deadlifts, allowing essentially no deviation from perfect execution. If form broke down at all, we ended the set or the training session, as needed. He trained three days a week, every week, without failure – consistency is part of the rehab process. The weight progression,



number of sets and reps, as well as exercise selection was not exactly uniform. We let pain provide a guide for each day's training and adjusted accordingly.

## **Physical Therapy?**

Although Scott had been evaluated by physical therapy while hospitalized, appointment availability was scarce, and he left without scheduling a follow-up session. Through word of mouth, he received a recommendation for a local rehabilitation facility a week or so after he was discharged from the hospital and called for the first available date, at which point he was informed there was a waiting list lasting about five weeks. He put his name on the list, but he still has never received a call about making an appointment.

Accidentally, he found out that the hospital had scheduled him for a physical therapy session in late September, but by this time, he had already achieved substantial improvement using the Starting Strength program, so he chose to cancel the appointment. To date, Scott has never been to physical or occupational therapy aside from the single evaluation that occurred in the hospital.

For Scott, a major contributor to his ability to trust us and the other coaches at Fivex3 was the obvious results he observed in response to corrections to his technique through coaching. Psychologically, the ability to connect verbal cues and lengthier conversations about form to actual improvements was proof enough that the program works and the coaches were knowledgeable. With that in mind, and considering the history we all provided about our own experiences with injuries, he never doubted the method would work in his instance. Moreover, he told us, our ability to relate on a human level, apart from simply a business-client relationship, enhanced his faith the process and the likelihood his brain would not block out our guidance. Having maintained membership at a number of commercial gyms for many years before joining Fivex3, Scott said he never had the opportunity to connect with the gym owners. It became clear to him early on that we care about our members' wellbeing first.

At the time of this writing, about fourteen weeks after a herniated disc sent him to the hospital on August 22, 2017, Scott squatted 290 lbs for three sets of five, deadlifted 305 lbs for a set of five, and pressed 160 lbs for three sets of five. His bench is humming along at 305 lbs for three sets of five. Scott is continuing to train. He is mentally and physically prepared every single time he sets foot in the gym, three times a week, focused and attentive to each and every detail of each and every lift. There are some days where he cannot believe he got back to training as quickly as he did. But it doesn't surprise us. The power of the mind and the desire to be strong is very powerful. Most importantly, Scott trusted the program and the process. And he is now PRing his squat and deadlift. And he's finally taking that trip to Amsterdam.

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## **References**

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## ***Back Rehab 101***

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