



How to Treat Chronic Back Pain Without Surgery: Video Transcript

Speaker 1 ([00:00:12](#)):

Good evening, everyone. It looks like we have some patients go ahead and hopping on. We will go ahead and give it just a few minutes here to kind of let everyone get situated.

([00:00:48](#)):

Good evening, everyone. It looks like we have a few patients jumping on. We will go ahead and just give it a few more minutes here to kind of let everyone get situated. Thank you. It looks like we still have some patients getting situated, so we will begin here in just a couple of minutes. Thank you. All right, good evening and welcome. We have an excellent program prepared for you this evening. This webinar will last about 45 minutes to one hour depending on how many questions we receive. We will first hear from Dr. Angela Bohnen on treatment options for chronic pain, followed by a patient of Dr. Bonin Heather, who is going to share her journey with chronic pain and talk about how a therapy mentioned tonight help her take back control of her life. We will conclude the webinar with questions in this webinar format only the presenters can be seen and heard. Therefore, for questions, please use the q and a feature at the bottom of the screen. Now on to our presenters. Dr. Bohnen specializes in neurological and spine surgery. She completed fellowship training in neuro-oncology at Mayo Clinic. Dr. Bohnen strives to provide the best care to her patients based on each individual's needs and believes that compassion is a catalyst for healing. She's an amazing resource to our community and we are so lucky to have her with us here tonight. Dr. Bohnen, I'll now kick it off to you.

Dr. Angela Bohnen ([00:04:09](#)):

Thanks Alex. Hi everyone. Like Alex said, I'm Angie Bohnen. I'm a neurosurgeon with neurosurgery one and we're doing this little conference symposium to just touch on chronic pain. There's a ton of people who live with pain and they've been told it's either nonsurgical or can't be helped and there's a lot of misinformation and sometimes people feel like they don't have any options and there are options out there and sometimes people don't know about them. So this is a broad overview on different treatment options for patients with chronic pain that might not have been looked into. And so our itinerary of what we're going to talk about is we want to talk about different treatment options. We want to see what options may work best for personal chronic pain and then this ideally will help you identify maybe some questions to ask your providers or routes to take that you haven't taken in the past.

([00:05:14](#)):

Arvada

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Arvada, CO 80007

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Castle Rock, CO 80109

Lakewood

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Littleton

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Lone Tree/Park Meadows

9980 Park Meadows Dr., Suite 101
Lone Tree, CO 80124

Lone Tree/Yosemite

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Go ahead Alex. So first, I think it's the most important thing ever to understand that there are different types of pain. So one of the first things that you I ask provider asks is what pain are you feeling? Where's it at? And this is so that we can identify ideally what might be causing your pain. Pain can come from muscles, joints, bones and describing pain is one of the hardest thing ever, but it's to help us try and hone in on what area to look at. In addition, we typically will ask what makes it worse? What makes it better? Symptoms that might be associated with your pain such as weakness? Do you have any numbness? And is that numbness objective? You can actually feel numb if you touch or is it an internal type of subjective numbness. Some patients will experience pins and needles, which is a totally different ideology. And then some patients pain are shooting, burning and stabbing. We do understand it's very hard. It's probably the hardest question that I ask in clinic is to ask somebody to describe their pain. It's very difficult, but these are the things that we're looking for and the best description that you can give us will help us understand what might be the structure that's creating the majority of your pain. Go ahead.

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We also want to know how is this affecting you? I want to know what your daily activities look like. What is your job at work? Are you lifting everything? How long can you stand in the kitchen? Can you do dishes? So I want to know if you're able to perform basic tasks around the house, how productive you are at work if it's affecting your productivity. Some patients will tell me their goal of any intervention is really so that they can continue playing with their grandkids or go to ball games. Other patients, when their pain's really bad, it affects them sexually, which then creates tension within a marriage and can create discourse. Things like gardening and arcs important for the psychological nature of life in general. And when pain starts to affect that, it can then lead to depression. And then other people, their goal is mainly they want to be more active and they can't be because maybe their leg hurts.

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So really identifying how the pain is affecting you on a daily basis also helps us identify our goals and if we can meet those goals with different interventions, we also want to know what types of therapies. So any sort of pain usually starts with identifying what may be generating it. And then we start with the least invasive and work up to the most invasive treatment strategies. Things like anti-inflammatories, probably everybody in their life has taken Tylenol arthritis. This can help with a lot of different joint pains. We oftentimes will start with physical therapy as well. Physical therapy is amazing, can actually take care of a lot of different pain problems just by reinforcing joints. Adding strength to stabilizing muscles, stretching tight muscles, which believe it or not, can cause a lot of back pain. People will have really bad hamstrings and when they can't bend over and touch their toes or hardly bend over, that leads to further back pain.

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I always try and tell patients you learn that song, the hip bones connected to the kneebone when you're a child and that absolutely is true. So the way our body works together can affect other joints. So a patient who has knee pain and is walking funny may come to see me because they have back pain and it's related to their knee. So having a physical therapy evaluation to look at those mechanics and then



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teach you different compensatory mechanisms can help your back pain. Believe it or not, things like TENS units A TENS unit is a little application that you can put on your skin and it provides electrical impulses into those muscles and it can help relax them and decrease pain. It's a superficial device that you can use. We try and avoid stepping this up to medication therapy at all costs. There is an opioid epidemic going on but sometimes we need to give pain medication so that we can get you to a state where you can participate in physical therapy for the long-term benefit of decreasing your pain.

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There've been multiple studies out now that show opioids do not help chronic pain. The only thing they do is desensitize your body to them. So you'll see patients who are on multiple medications and what happens over the years is that they keep going up and up and up and you're only feeding a body physiologic dependency, but you're not actually helping their pain. And one thing I tell my chronic pain patients too is if we're ever looking at a surgery, honestly, we try and wean them down on their medications as much as possible because when somebody is on such high doses of morphine, for instance, controlling surgical pain afterwards can be a terrible beast. So we try and limit them as much as possible. Further interventions include drug pumps. These are for really extreme pain. They're becoming less and less popular because they're pumping narcotics or other sort of anesthetic medications into your system in a continuous basis. But patients who have things like cancer, pain, bone pain, this is where drug pumps come into play.

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Surgical intervention may or may not have a role with chronic pain and then nerve blocks. So before we ever lead to surgery, a lot of patients will get a review from a psychiatrist or a pain medicine doc, and this is where an evaluation of injections. Injections are twofold. And the way I counsel patients is that they can be both diagnostic and they can be therapeutic. Understanding your pain is the number one to me, the number one indicator that I can help your pain, I have to understand it to tell you what you need done, especially if it's going to be a surgery. And so injections can target different areas of the body, particularly the spine. We can target the nerves, the discs, the joints, and depending on how somebody responds to those, it gives me an idea about how much pain is coming from that region.

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That's the diagnostic portion of it. They can be therapeutic though, meaning they may one last a really long time and they may take your pain away completely. People who come to see me with herniated discs and leg pain, 80% of those people will get better with non-surgical measures. And the way I get them through that really painful process is with an injection because by decreasing the inflammation, you decrease the pain and then patients can participate in that physical therapy. So we try and start with that least invasive and whittle down until we have to keep bumping up the aggression. Go ahead.

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So two options that aren't well publicized and I think a lot of medicine doctors don't know about are one radiofrequency ablation and two spinal cord stimulation. So radiofrequency ablation is done by a pain



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physician and it's exactly what it is it uses or what it says. It uses radio frequency to ablate a piece of nervous tissue such as a nerve. It creates heat to these small areas and it kind of the way, lack of a better way to explain it, kind of deadens that area. Now these aren't nerves that control strength or sensation, tiny little nerves that come off of the spinal cord that then go to the joints in your spine. So remember, arthritis basically is inflammation of joints. Your entire spine is made up of a bunch of little joints. So just like the joints in your fingers get big, the joints in your back do the same thing and they can become painful.

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So RFA is a great modality to help people with particularly back pain and maybe a little bit of leg pain but predominantly back pain. And so there's these little nerves that come off the sides and they run around those joints in the back. And what an RFA does is it kills those tiny little nerve endings which only feel so they're only sensory nerves and if the joints are order creating pain, will you kill those nerves that are feeling that pain. So that's what helps decrease it. Now RFA does take some trialing. You have to have two diagnostic injections. First, these are called medial bundle branch blocks. That's basically the nerve that's being blocked to prove that it's creating some pain or that it's feeling the pain. If a patient responds well to those blocks, they then qualify for an ablation. An ablation is a beautiful procedure because it's minimally invasive.

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It's done through a needle and a heating device. It's an outpatient procedure. Even if you failed other injections such as epidural injections, this can still help and it can be repeated. So the results of an RFA can be immediate, but they can take a few weeks to work. They do hurt a little bit more than injections, but most patients tolerate that extremely well and they can last a good six or 12 months. So some of my chronic back pain patients may have an ablation or two every year, and that keeps their pain at a tolerable level so that we then meet the goals. We previously talked about doing more within your day, getting back to your hiking, playing with your grandkids. It doesn't necessarily take it a hundred percent away, but it lessens it to meet your goals.

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There are different conditions that can be treated with an ablation and basically any tissue can be ablated. Even people with AFib have had ablations in their heart to kill that tissue. That's creating the fibrillation. It's the same concept, so we can use them in the neck, the back, they can be done in the knees. RFAs can be done for different types of cancer pain, some facial pain. And again, these are done by a pain medicine or an injection type of physician. Go ahead. So the big culprit of this discussion is spinal cord stimulation. Spinal cord stimulation is something that is not very well known. It's getting out there, more people are learning about it but even some physicians who treat tons of chronic pain patients haven't heard of this, and so we're trying to publicize it because it can work really, really well. Go ahead.

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So who is a candidate for a spinal cord stimulator? In my opinion, anybody is a candidate for a trial of stimulation if they have chronic pain. This can be neuropathic pain that's anywhere in the spine really we do it from the neck as well. The extremities, the most common diagnosis that we will use it for is something called failed back syndrome, and that's a patient who has had multiple surgeries and maybe they went well in the beginning they had a discectomy which then led to a fusion and now they're on their third fusion and they just have this chronic pain that is very non-descript, not mechanical. It's a neuropathic sort of systemic regional pain syndrome that nothing is working for. They've failed injections, narcotics don't touch this very well. Those patients do extremely well with spinal cord stimulation. Again, you have to have failed. Other modalities, particularly we look at about six months of nonsurgical management diabetic neuropathy, spinal cord stimulation doesn't take care of the numbness that comes with neuropathy, but sometimes neuropathy becomes painful to where patients can't wear socks or they walk on the floor and it burns or hurts.

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That type of pain responds really well. There's also something called UM, C R P S or complex regional pain syndrome. It used to be called a reflex sympathetic dystrophy, and basically that's where an A trauma has happened. So somebody works in industry and their arm gets crushed in, they have this massive pain in that region, will often see color changes to their skin. But it's this horrible pain that honestly nothing touches that responds really well to stimulation. The goal being, and most of these patients are on significant medications. And so the idea is that by treating their pain in a different way, you can lessen the amount of medications. If not get them off their medications because as patients take more medications, it affects their entire life, it affects them cognitively how they're functioning at work. And so if we can get somebody even half of their levels, that's a huge win. Some of the questions we'll want to know though is we'll just want to know that we've tried everything. This is, in my opinion, use this as a last ditch effort and consider it when everything else has been tried and failed. Go ahead,

Speaker 3 [\(00:19:24\):](#)

Dr. Bohnen, I do have a question that came through. I'm going to go ahead and summarize it a little bit. Basically you touched on it with the neuropathy and treating chronic pain, but maybe not taking care of the numbness. If there is a mechanical issue or an issue like stenosis that goes untreated and you do a spinal cord stimulator, how do you know that that's not getting worse or progressing to be in a worse state essentially?

Dr. Angela Bohnen [\(00:19:46\):](#)

Good question. So part of the work up that you undergo prior spinal cord stimulation is that you've had your imaging and you've had the non-surgical stuff, right? So the conversation I have with patients is, okay, what do I think is creating your pain? Is it a pinched nerve? If something is mechanical and can be fixed surgically, that is usually done first. It doesn't take care of weakness or numbness, spinal cord stimulation. So if a patient has profound weakness, say in their foot because their nervous pinched spinal cord stimulation is not a great idea. A pinched nerve hurts, yes, you have pain, but we got to take pressure off of that nerve so that your foot can ideally function. Now where we run into problems, and honestly this is where the art of medicine comes in, and it's a huge fan of just education. So patients



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who are having spinal cord stimulation, honestly 10, there are young patients who just have chronic pain and their imaging is negative or they're older patients who might need a surgery, but the surgery is way too big.

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So it an 86 year old who needs a big fusion. I'm sorry, I wouldn't let my mom have that surgery. I'm not going to offer it to you. So if pain is really your only component of your symptomatology, I'm going to talk to you about a spinal cord stimulator. And you're right, I am not. The conversation I have is I am not taking pressure off of the nerve, right? I am changing the way the nerve senses and understands pain so I can help the pain, but the pressure on the nerve is still there. Patients can develop in the future, they can start to develop worsening symptoms such as a weakness. And if they do, then we have to reevaluate. And the beauty right now some of these spinal cord stimulators is that they are MRI compatible. When I trained years ago, these were not M R MRI compatible, so it was the detriment to put them in because to get an mri, you then had to take them out, which negates why you put it in.

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But nowadays, if something else happens, which is a risk I talk about, we can look at it. Does that answer that McKenna? That does. That was great. Thank you. Okay. So as far as S ses, which is what we call spinal cord stimulation for short, it has tried and true, right? This has been in practice for over 40 years and it is FDA improved. And over the past few years, and I've seen this, I'm young and I've seen this in my young professional development, they have improved tremendously. I didn't love them when I was in training. I felt like they had limited use. But now that I've been in practice and pushing it a little bit, we find that the indications are expanding quite rapidly as far as what patients respond to. It's also reversible. So yes, it's an implantable device, but that implantable device can come out. It's a non-drug therapy and the whole idea is to get you off your drugs, which I have seen people go from hand loads of opioid medications on a daily basis to no medications.

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It is covered by most insurance plans, including Medicare and some workers' comp programs. And again, it's new and improved. And honestly, I think the best thing about it, again, I kind of use this as a last stitch effort, you can try it before you buy it per se. You have to undergo a trial of spinal cord stimulation before you qualify for an implantation. And that is by far the best thing ever because you've proven it. Go ahead. All right. So how does it work? We're going to watch our video and then if there's questions about it, because it's hard, honestly. And there are different spinal cord stimulators. Some of them use different frequencies, some of them use something called paraesthesia. It is a difficult thing to conceptualize, I think. But this video does a good job at explaining it at a basic level.

Dr. Angela Bohnen ([00:24:10](#)):

If you live with chronic pain, you know how all-encompassing it can be. It robs you of the things you love to do. It strains your relationships. It makes even the smallest tasks unbearable. And no matter how many procedures you've had to endure or medications you've been given to try, we know that one size



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fits all therapies may not give you all the relief you need. Boston Scientific's, spinal cord stimulation therapy is different. Spinal cord stimulation or SCS is a safe drug-free FDA-approved pain management therapy that's clinically proven to help reduce chronic pain. And with Boston Scientific's SES systems, your therapy can be personalized to your unique needs and preferences. Here's how it works. When you feel pain in your back or leg for instance, it's because nerves from that part of your body are sending pain signals through your spinal cord to your brain. It happens in a split second, so it feels instant, but the truth is you don't actually feel pain until your brain receives a pain message from the part of your body that hurts. SCS is designed to interrupt those messages using a small electronic device called a stimulator and thin flexible leads

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Similar to a pacemaker, the stimulator is implanted under the skin where it generates mild pulses. Those pulses travel through the leads to nerves along the spinal cord and interrupt the pain signals on root to the brain. Most SCS systems replace the feeling of pain with something called paraesthesia, a kind of soothing sensation that can reassure the patient that therapy is working. Other SES systems produce no paraesthesia. Boston Scientific's SES systems offer both options giving you the flexibility to choose from a range of sensations or if you prefer no sensation at all. Boston Scientific's SCS systems can also deliver more than one type of stimulation at the same time, even to multiple areas, giving us a better chance of finding the right treatment for your particular pain. Results of a clinical study show that when patients can choose between multiple therapies in one device, they achieve better overall pain relief.

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Another great thing about SES is that you can do a trial with a temporary system first to see how it works for you. Your doctor will position the leads in your back and then connect them to an external stimulator that's worn around your waist. For the next three to seven days, you'll be able to test drive the device experiencing what SES feels like as you walk, sit, sleep, and just go about your life. Most people who try a Boston Scientific system feel significant relief. In fact, in a recent clinical study, more than 90% of patients who tried our system decided to go forward with the implant. Over 96% of patients said they would recommend Boston Scientific's SES systems to other people suffering from chronic pain. In another study, patients with severe back pain reported in average drop in pain score of nearly six points even two years after getting their Boston Scientific SES system. The effective long-term relief from chronic pain your Boston Scientific SES system provides can help you reclaim your life and many of the activities you used to enjoy. Talk to your pain doctor about SES. Learn about the benefits of multiple therapies and personalized pain relief from Boston Scientific. For more information or to find a pain specialist, visit controlyourpain.com.

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Perfect. So how do we know if a trial works for you? Well, usually the steps a patient starts with a physiatrist or a pain medicine doctor, and they're the ones who do the trials. Some surgeons do their own trials. I personally do not. Our pain medicine docs do them for us. They slip in those little leads. It's an outpatient procedure and usually it depends on where your pain is as to where they put the leads. So you'll go through a comprehensive evaluation as to where your pain is and what pain you want treated.



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They then determine where to put those leads. They'll put them in under x-ray and then connect them. And you get this awesome little fanny pack that you can wear for a few days. And really the goal is to see how does it work. It may be in the trial, might be in for anywhere from three to five days, and you really want to test it.

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Take your walks around the block, identify your goals before you undergo the trial. You want to stand longer for the dishes, really push it if you are minutes or five minutes before look and see what you can do after the trial's running. Because I want to know what's going to get what has gotten better, right? The qualifying number that somebody has to tell me based on the indications is 50% better. I'll be honest, I don't love 50% and I'm apprehensive to put them in patients who tell me 50% because I often find that 50% isn't always what they want. At the end of the day, the closer somebody is to a hundred percent of meeting the goals they identified, and it might not be a hundred percent pain relief, it might be pain relief to the point where you can get through the dishes, you can go on a two mile walk and that's okay.

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It doesn't always take care of a hundred percent of the pain. And I think that's the biggest misunderstood piece of information that patients don't understand when they undergo this stuff. So I specifically ask, what daily activities could you do when the trial was running compared to when you didn't have it? How much medication did you use? And when I see patients first before the trial, I try and tell them, try and not take your medication. See if you can back off even if it's skipping a dose or elongating a dose to a two hour mark, let's try and push it a little bit. And then how did you sleep? Patients can't sleep because of their pain sometimes. Were you able to relax? Were you able to sleep better? How did you feel psychologically? Did you not even identify your pain those few days because you were able to be up and do more than you wanted?

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So sometimes of s e s can be personalized for you in your specific pain, and that's what I mean. You're going to go through a comprehensive evaluation first to identify your pain. For instance, is the pain mainly located in the feet because we're going to put those leads a little bit lower compared to if it's your back versus your leg. We tend to put them up in the thoracic region, but they also are trials for patients who have chronic neck pain and arm pain. Those are a little bit more nitty gritty but they can be done still as the outpatient procedure and implanted as well. It's not just for back and leg pain. Again, there are different types of modalities that these generators will use. So the paraesthesia base where patients do feel a little bit of a buzzing, it doesn't bother. Some patients like it because they know that it's working and they know it's working where their pain was.

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Other patients that don't like it, they'll use the paraesthesia free or you can use the combined. And the best thing about it is that you get a remote control. So you get a remote control and you get a



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representative from the company that helps you and you identify even during the trial, you identify different programs. And depending on your pain profile, I'll give you program A, B, and C to use and you can toggle between those C. What helps, is it a different frequency? Is it paraesthesia versus non paraesthesia? And we try and understand that as best we can. Even starting with that trial, go ahead.

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It is very safe and effective. And honestly in my mind, there's no patient who isn't a candidate for a spinal cord stimulator trial because they are so safe. I have seen one in my 11 years a trial ever get infected. I would let my parents go through one if they had chronic pain. So most patients report excellent outcomes. And again, outcome is very patient independent. So identifying your goals leads to a successful outcome. It doesn't necessarily mean zero pain, but again, the average reduction in pain scores went from about an eight and a half to a three even at two years, which I think is tremendous. And again, it really screams that some patients will still have pain, but if three pain, much more tolerable, much more likely to allow you to do your daily activities, walk your dog, play with your kids than a nine and potentially get you off your medications. Go ahead.

Speaker 1 [\(00:33:42\)](#):

So Dr. Bohnen, I'm just going to chime in really quickly because we have a couple good questions here. One of 'em kind of fits this mold here with the restrictions following the implant. And specifically just this patient mentioned aerobics, we, I've got a couple golf questions, things like that. So if you could speak on the restrictions once you're fully implanted, fully healed with the spinal cord stimulator.

Dr. Angela Bohnen [\(00:34:05\)](#):

So fully implanted, fully healed. Honestly, I don't give you restrictions. I'm not a big no person on most things in life. It's about what risk are you undertaking. So the risk of a spinal cord stimulator from an activity standpoint is going to be infection. So to get into an aerobics program, you 100% have to be fully healed, which I mean I would tell you give it a month before you ever get in a pool and I probably want to see that incision. Golf wise, golf is a lot of torsional movement. So the risk with activity in general is that imagine these leads. So you have the back of your spine like this. Well, I'm going up and I'm putting leads under the spine. That means it's between your spinal cord and bone, right? I cannot stitch that in to your spinal cord. I do tether it, but all of us tether it and you suture it in outside of the spine.

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But there's always a little bit of wiggle room, meaning a theoretical risk of spinal cord stimulator is that the leads can migrate they can pull out. It is not common. I've seen it a handful of times and I've seen lead them flip. Honestly, I've seen them flip in little old women who weren't playing golf, but that's the risk. I would tell you if golf is something you love to do and you're now in a state where your pain allows you to play golf, go play golf. You will know if something happens. So it's a small risk, but honestly it's a risk. I think that is worth taking and most patients would take. Is that the last one?

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We can jump into one more here with the battery once you're fully implanted. The question was specifically are there issues with the battery shorting out? And I think that there's an answer to that as well as the lifespan of the battery based on programming and things like that. And I'm happy to chime in, but you can take that one off too.

Dr. Angela Bohnen ([00:36:10](#)):

Sure. So you have to remember that these implants are mechanical and if your car can break down, these things can break down too. So there's always going to be a risk that can a battery malfunction. The answer is yes, they typically don't, but you do this long enough, you'll see it. So the biggest thing with the batteries, there's two types of batteries. There are rechargeable batteries and there are non-rechargeable batteries and the lifespan of the battery differs. So a rechargeable battery obviously is going to last longer. It tells you when it needs recharged. There's a little adapter that you just put on your skin and it recharges it percutaneously or through the skin. Those batteries last a good 10 years and even more sometimes a lot of it depends on what your settings are. So some patients need very low settings to control their pain.

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Other patients need really high settings. So you can imagine high settings are going to require more battery output in that generator versus a low setting. So a high setting is going to require more frequent recharging. And that same concept translates over into the non-rechargeable. So a non-rechargeable is probably good three to five-ish years on average. The downside is that when your battery is out, the only way to replace it is to replace it. Now that's a very short, quick, safe surgery. It takes 30 minutes to do when you go home the same day, but it is an extra surgery. But the benefit of the non-rechargeable is that you don't have to recharge it. I would say for most patients tr, if they have no limitations with getting around to their back, I try and encourage them to do the rechargeable because I would mean why if the surgery in three years versus 10 years is a big difference. So I think the rechargeable is much better, but I do talk about it with every patient and ask their preference.

Speaker 3 ([00:38:16](#)):

That was great. Thank you.

Dr. Angela Bohnen ([00:38:19](#)):

And like I said, so the best thing about a trial is that you get a whole team of people. So you get a physiatrist or a pain medicine doc who puts it in for you. So they explain the procedure you get, depending on what company they use, there's always a representative of that company that is attached to your case, which I think enhances the outcome and leads to a more successful trial as well because it's a really intimate relationship. So sometimes you meet those representatives even before and they'll educate you about it. So if I have patients who are on the fence, sometimes I'll text McKenna and be like, Hey, can you call this patient? They really want more information and she can help you out. That being said, if you undergo the trial, the representative is there to help you. So they give you different programs to try.



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They ask your feedback, they may change a program, and then they keep track of how you're responding and what you tell them. And honestly, they help me even more than patients do sometimes because the best thing I hear from a patient is, Hey, how quick can you put this in because it works so well. I've loved it. But then there are some patients who are, well, I was able to stand longer, longer and by the time they've seen me, it might be a few days or a week, they don't remember as well. And the reps keep track of what you're telling them. So they'll remind you, Hey, remember you told me you could stand for 10 minutes and do the dishes. And so it's a great memory bank as well. And then if you want to explain kind of the program that helps us identify all of this, that would be great.

Speaker 3 [\(00:39:58\)](#):

Yeah, absolutely. Hey everybody, I am McKenna. I am one of the representatives that works very closely with Dr. Bowen and this is a fantastic tool. Our entire goal of this process with you guys is to make sure you have genuinely a very good experience. And we believe that that starts with very early education. And so when you have this app, there is a ton of material that you can read down to video patient testimonial videos a ton of information. Our information is even within the app where you can call us one off and we can educate you. So from the beginning all the way to the trial, we do want to make sure that you feel like all of your questions have been answered. And then once this trial takes place, my CS app that you see here as you can see on the screen, shows a way for us to track how you're doing.

[\(00:40:45\)](#):

And we, we've mentioned the 50% relief a few times. I could not be more on the same page with her when it comes to trying to get you more than that. And that means trying some of those different modalities that she's mentioned, different programs, high frequency subception or that tingling. And so we communicate every single day to make sure that this thing is not only working but working to the best of its ability. And this tracking tool allows us to get notified the moment that you input how you're doing. So she mentioned three to five days. Sometimes that can go up to seven. But either way, it's very, very short and we want to make sure that we get a very sure answer from you about moving forward if this was something that was successful for you. So that timeline in between. And then as well as a report that we can give Dr. Bowen by the end. And this is entirely in your words because you can put little answers in there. And historically we've really kind of utilized your feedback to me and then me giving it to her and then notes from the office. But this has been so awesome for us to send to insurance companies and for your physician to see directly how you've been doing. So it's been an incredible tool that we've been using for about a year now.

Dr. Bohnen [\(00:41:54\)](#):

And the other thing I can't stress enough too is I mean you listen to this and it sounds like a cure-all right? Honestly, it, it does not work for everybody. But again, the best thing is that you can try it before you buy it. And I used to be a big nonbeliever in just a lot of it, but as they've developed over the past few decades, they're better and better and pain that I didn't even think would get better with them did. So I've, I've heard patients with fibromyalgia who just have had pain kind of all over, respond really well



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for whatever reason. Sometimes it's not necessarily explainable. And that's why to me, if we've tried everything and you match a qualifying diagnosis, there is no reason I won't send you for one of these or at least suggest it.

Speaker 1 ([00:42:51](#)):

Awesome. Well, thank you so much Dr. Bowen and thank you McKenna. We're kind of going into that. We are now going to pass this along to a patient speaker. So I'm going to kick it off to Heather. Heather is one of Dr. Bowen's patients and she's actually been implanted with a spinal cord stimulator for about a year now. So she's going to kind of jump on and tell her experience.

Heather ([00:43:13](#)):

When I got to Dr. Bohnen, I was just not walking well. I was walking with a walker a cane, any kind of walking device. It was rough. The start of all of this happened when I was about seven months pregnant with my third child. I slowly lost the ability to walk. And four years later, they figured out it was caused by May Thurner syndrome, which is the vein coming out of the left leg being squished between your spinal cord and an artery going into the right leg. So it was causing a lot of pelvic pain and leg pain. I had endometriosis as well that was causing some leg pain and hip pain.

([00:44:11](#)):

And the third surgery to fix all of this, they fixed a vein right in front of my tailbone that was in a bundle of nerves. And from that was my new chronic pain, and I was taking medicine for that. They had done a couple of blocks the first two worst and the third one did not. So I was a great candidate for this spinal cord stimulator, which has taken my pain down 100%. I still have the original issues. I still have some swelling in my legs, but nothing like before I'm, you see this picture, I walked, I hiked up devil's head fire lookout down in Sedalia. It was over 900 feet in elevation elevation game. The whole thing was 9,000 feet in elevation. But I can't describe how amazing this is and how good it's worked for me.

Speaker 1 ([00:45:16](#)):

Yeah. Thank you. Heather, can you tell us during your trial, how soon did you know that this was going to be a good option for you? And what percentage of relief did you get during your trial?

Heather ([00:45:26](#)):

I did have some postsurgical pain. So back pain, unfortunately it didn't take care of its own pain. The pain in my tailbone and legs were totally gone. I could cross my legs when I was laying down, which is something I haven't been able to do in a really long time. And my tailbone did not hurt sitting in the, I didn't have to readjust every three minutes. It was good. I think it was about a hundred percent.

Speaker 1 ([00:45:55](#)):



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Awesome. And can you tell us a little bit how your life has changed in the past year since having this device? Maybe some of the things that you're now able to do that you weren't before?

Heather ([00:46:04](#)):

I can play with my kids now, which was huge before I was mommy on the couch. I can hike up mountains. I rode eight miles this morning on my bike in Waterton Canyon.

Speaker 1 ([00:46:22](#)):

That's awesome. Yeah. What

Speaker 2 ([00:46:24](#)):

About your medication, Heather? How much medication were you on before? How much are you on now?

Heather ([00:46:29](#)):

I was on Tramadol two to three times a day. Now I just have ibuprofen maybe once a week.

Speaker 1 ([00:46:40](#)):

Awesome. And was it hard for you to get used to kind of using your remote or did that come pretty easy for you?

Heather ([00:46:47](#)):

It came pretty easy. The rep did a really good job of explaining the different, sorry, I can't think of the name of the different modes.

Speaker 1 ([00:46:58](#)):

Yeah, okay.

Heather ([00:46:59](#)):

Frequencies. So when I am working out or doing something hard, sometimes I call it turning my legs on, which I think you guys called it the para para. These parata. Yeah. I turn my legs on for hard activities and it just stays on silent the rest of the time. I don't mess with it. I carry my remote with me, but I don't ever need it.

Speaker 1 ([00:47:25](#)):



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Awesome. Well, thank you so much for sharing your story. We're now going to open it up to questions. So again, please use the q and a feature within Zoom to ask questions. Your questions can be directed towards Dr. Bohnen, McKenna or Heather. So we will go ahead and open that up to discussion.

Speaker 3 ([00:47:42](#)):

We had a question come through for Heather that just says, do you carry your remote with you all the time or how do you typically fit it into your daily life?

Heather ([00:47:51](#)):

I carry it with me and my purse if I don't take it on the hikes with me, which I probably should, but yeah, it just kind of hangs out in my purse. And

Speaker 2 ([00:48:02](#)):

Heather, how often do you recharge your battery?

Heather ([00:48:06](#)):

Maybe once a month.

Speaker 2 ([00:48:08](#)):

So not bad.

Speaker 5 ([00:48:10](#)):

Not bad at all.

Speaker 3 ([00:48:14](#)):

One thing I'll point out is that with the remotes, you don't need to carry it with you. So with the subception programming these days in really the internal device being what operates the stimulator, the remote doesn't need to be on your hip or near the battery. It just needs to be near you to make that adjustment. I've got a couple questions about the remotes. I just wanted to make sure I preface with that because it just needs to be within proximity to make that adjustment.

Speaker 2 ([00:48:39](#)):

Okay.

Speaker 3 ([00:48:42](#)):



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And then, all right, we got another one. Is the remote used only when you feel pain or do you turn your stimulator off?

Heather ([00:48:52](#)):

I'm sorry, I don't understand the question.

Speaker 2 ([00:48:54](#)):

Do you leave your stimulator on all the time?

Heather ([00:48:57](#)):

Yes. It's on that non paraesthesia mode where I don't feel it, but it is working.

Speaker 2 ([00:49:05](#)):

So I have patients who their pain is predominantly at night and they will turn it off during the day and then turn it on at night. So pending your pain profile, you don't have to have it on all the time, which honestly, Heather's is on all the time and she only recharges it once a month. So doing it half the day part of the day, you might not even have to recharge it that often. And that's the best thing about it is you can turn it on, you can turn it off, you can change the program, you can turn it off, you can turn it down. So there's so much variability with it that it can hit a broad range of pain profiles and give you the control of it as well.

Speaker 3 ([00:49:51](#)):

So another question, Dr. Bohnen, I think it would be good for you to reiterate, we talked about it a little bit at the beginning of the presentation, but kind of just the interference of receiving pain relief but masking any other kind of pain. Sure. Right.

Dr. Angela Bohnen ([00:50:07](#)):

Yeah. So spinal cord stimulator is for pain alone, right? Different different pathologies in the spine create pain when it's related to say a compression type issue, meaning there is some narrowing of the nerve. We aren't actually taking care of the physical nature of that pressure. So we are masking a little bit. It is a bandaid to take care of the pain necessary, but that pressure is still there. So where I do not use spinal cord stimulator is if somebody has weakness, if you have weakness of your foot because you have a pinched nerve, you're going to have pain. But that pressure that's creating the pain needs to come off because it's also creating weakness, which is a sign that the nerve isn't working. Well. Just because you have pain doesn't mean the nerve isn't working. It's obviously alive because you're feeling it, but weakness is a sign of function.

([00:51:19](#)):



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So if there is a functional issue, to me, a spinal cord stimulator is not the first step if it's spinal cord stimulator versus surgery because not taking the pressure off has deleterious effects. That being said, there might be narrowing there, creating some pain, but your nerve is fine. We can treat the pain without taking the pressure off, but the narrowing is still there. So I warn patients that in the future, if that narrowing were to get worse, it could create some nerve issues which might precipitate as weakness. So I give them the warning signs that if they start to develop that they have to call me so that I can evaluate it. But again, part of being a candidate for a spinal cord stimulator is that you don't have a functional or a surgical issue. So I don't run into that problem very often. Where I do run into it honestly, is the older population.

Speaker 3 ([00:52:33](#)):

Yeah, that was a, yeah, great answer. Yeah. Ok. And then the other one, I think it'd probably be good to speak on it for both the trial and the implant. So what is entailed with anesthesia?

Dr. Angela Bohnen ([00:52:45](#)):

Oh, great. So the trial is a sedation type of procedure similar to what you get for your injection. The trial itself, honestly, from a patient standpoint, it's not much more than what you experience from an injection. It's a needle. They thread the wire up through the needle and then they tape it to your back. That's it. The surgery itself is more invasive. So there are different ways to do the surgery. You can implant leads, which is usually two leads, or you can implant a paddle. And a paddle is almost like two leads that are fused together. So it's like one chunk, basically. I like the paddle better and there's different reasons why we might choose one or the other. But I like the paddle better because I think you get better placement. I think you get better contact on the spinal, the spinal elements and you get more variability as well as far as combinations of programs that you can use.

([00:53:51](#)):

So I prefer a paddle. A paddle can only be put in through a small surgery. It's a laminectomy, which is basically a small window of bone removal. Typically it's in the thoracic spine. If we're doing a neck procedure, then it's in the cervical spine. But for instance, if we're doing one for back pain and leg pain, you're going to get an incision in your back right around where a bra line would go, an incision maybe this long, and then you take off a window of bone and then you slide the paddle up underneath the bone and that's how it gets secured. So for that, I typically do general anesthesia for that. Now if I have patients who honestly, they're too sick for general anesthesia, there are ways to modify that. But hands down, the majority of them are a general anesthesia where you're completely asleep. They are still outpatient procedures so I'll still let you go home the same day, assuming that medically are okay to do that but it's a little bit more painful from that aspect as well just because you actually get an incision.

Speaker 3 ([00:55:04](#)):

Awesome, thank you. Okay, another one that came through a question, a couple questions about just tsa, you know, courthouses going through stores. Does this affect anything with the sensors that would go off?



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Dr. Angela Bohnen ([00:55:16](#)):

No. So most hardware these days don't create alerts or anything. If you go through a scanner, they're going to see it but you should not really alert anything. You shouldn't attract magnets or set off the microwave, nothing weird.

Speaker 3 ([00:55:34](#)):

Perfect. And then another good one that I think I'm happy to speak on is just kind of if it loses efficacy. So a lot of people have had these and then with time, and if you have something to start, you go for it. But as a programmer, I always, always recommend coming back in the number of combinations that there are within this set. This device and options, especially with myself and my tenured team, is wildly important to come in and try just different options even though you feel like maybe you have keep coming in. Because we keep learning, we keep having new software updates it's definitely important to do that. And our engineers are so brilliant at helping with the tolerance, if you will, that's built with stimulation. That is just very important to keep in touch with your reps.

Dr. Angela Bohnen ([00:56:17](#)):

And from a surgical perspective, I will talk, I always counsel people, it is a risk of surgery that something stops working, but if something is becoming less efficacious, one, I want to know about it because I want to look into it. Did something migrate, did the leads or paddle flip? So I want to make sure that everything is still functionally where it should be. But I'll echo McKenna's point is that we can try different programs also, they can map you to make sure that it's covering where it needs to cover. And then if one person can't figure it out, you get a whole host of people to follow to try based on their experience. What else may work? I mean, is there a potential risk that it does stop working? Are you desensitized to it? The short answer is yes, but honestly I put a decent amount of these in.

([00:57:08](#)):

I put four of them in last week alone. I am taking out my first one in, I don't know how many years honestly, that I can remember in the 11 years I've been doing this because it's not working. So it is not common. But again, you will always find a case report or a person to where it just stops working, but extremely not common. So I personally don't, don't worry about it, but I will tell you that it is a risk because it's a piece of hardware that you know is working with your body's physiology. We can't control everything.

Speaker 3 ([00:57:45](#)):

Yep. Awesome. Thank you. And I will turn it back over to Alex. There were a ton of questions, so if we didn't get to yours specifically, we will absolutely follow up with you. So thank you all for being so just involved and asking all these questions. It's awesome. It makes this really interactive, which is what we were looking for, so we appreciate it.

Speaker 1 ([00:58:03](#)):



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Yeah, thank you so much. I'm now going to quickly launch a quick poll. So you should see a poll launch and you can answer these questions. Like McKenna said, we will be following up with each of you. So if your questions didn't get answered, a lot of you have my information, feel free to give me a call as well.

Speaker 2 ([00:58:25](#)):

I don't see, so

Speaker 1 ([00:58:26](#)):

We'll leave people are answering it, so we'll just leave it up for a couple a minute or so and then I will drop it back to you. Okay. Dr. Bohnen, this is, I'll throw it back to you.

Dr. Angela Bohnen ([00:58:38](#)):

Okay, so what's next? Once there's information online, particularly@thepain.com and the Boston Scientific website, but then also you can talk to your physician about treatment options that you learned tonight. Our office is always available to help you figure out which route to go. So if somebody thought they might be a great candidate for this, I would say call our office, talk to one of our schedulers and they will triage some information from you and really understand what you've been through and then identify what the right next step is. Should you see me? Should you see one of the pain docs? Because a lot of this does start with the pain docs and cause this is becoming more prevalent and patients are more interested, we actually have what's called a device clinic, which is backed by me, but run with one of our nurse practitioners who helps identify that everything's been done and you are or are not a candidate. So any one of those three options might be a potential for you and our office can help figure that out.

Speaker 1 ([00:59:45](#)):

Awesome, thank you. Well, that concludes our presentation for the evening. A special thank you to Dr. Bohnen and our patient speaker, Heather. If you are interested, like Dr. Bohnen said in discussing these further, feel free to give the office a call tomorrow or reach out to me as well. Thank you so much and we hope everyone has a great rest of your evening and thanks again for joining. Thanks Steve.

Dr. Angela Bohnen ([01:00:05](#)):

Bye.

Speaker 1 ([01:00:05](#)):

Thank you everybody.