Workers' Comp

Pulsing Recovery: Bone Growth Stimulation's Impact on Comp

April 2, 2025
6 MIN READ
Author profile image

Nicole Usher

Sr. Director of Operations, Apricus, an Enlyte company

Listen on Spotify

Tom Kerr (TK): The goal of workers' compensation is to help injured employees heal as quickly as possible, so they can return not just to their jobs, but their everyday lives. Today, Enlyte's Nicole Usher, Sr. Director of Operations, Apricus, returns to talk about a DME device designed to do just that, the bone growth stimulator.

Nicole, welcome back to the Enlyte Envision podcast.

Nicole Usher (NU): Thanks for having me, Tom. I'm excited to talk about bone growth stimulators today.

TK: Great. So, Nicole, let's start with the first question I have here. What are bone growth stimulators and how are they used in workers' comp injuries?

NU: Certainly. So, bone growth stimulators, or better known as BGS in our industry, are medical devices that use electrical or ultrasound energy to promote bone healing.

In workers' comp, we typically see this used for complex fractures, nonunion fractures, or after spinal fusion surgeries. This is typically where normal bone healing is delayed or impaired for a multitude of reasons.

TK: Are bone growth stimulators effective for all types of bone fractures or are they limited in some capacity?

NU: That's a great question. Bone growth stimulators are not a one-size-fits-all solution and are most effective in nonunion fractures, difficult-to-heal fractures, and spinal fusion procedures. They're less effective and generally not recommended for simple fractures that are expected to heal normally. So, we wouldn't see BGS used in those

types of situations.

TK: Is BGS widely used in workers' comp?

NU: It’s fairly common that BGS is prescribed by a doctor. So especially in those complex injuries that are not healing as expected or if there's delayed healing, we've seen an increase in their use over the years as evidence continues to show the efficacy of bone growth stimulators.

TK: At what point of recovery are bone growth stimulators typically initiated?

NU: So, this can vary dependent on the treating physician or the treating doctor. We do see BGS prescribed typically, after about three-to-six months of no progress in healing. The treatment team will usually evaluate to see if it's an appropriate course of action. They are also used immediately after certain spinal fusion surgeries where the orthopedic surgeon may request BGS from the very onset. And then also for individuals who have are at high risk for delayed healing such as person with diabetes or a smoker. So, BGS is prescribed dependent on the treating physician at certain points. But we do see this around three to six months of non-healing or delayed healing.

TK: Okay. Now the really important question, how does BGS work? Is it something the doctor implants and can injured employees use them on their own? Or is it part of a treatment that’s initiated or monitored by a health care professional?

NU: BGS is typically prescribed by the treating physician, who has oversight over the course of treatment. These devices deliver low-level electrical or ultrasound —depending on the unit — signals to the fracture site that stimulate cellular activity or regeneration promoting bone growth. So, most of the common BGSs can be used at home after initial setup. Patients are given thorough instructions by a health care professional on how and when to use them. But the device is used over the course of treatment, so it’s typically required daily use for two-to-three months and sometimes longer, depending on the person’s recovery rate.

TK: Okay. So, let's say I have a lower arm fracture. Would the device be placed around the skin externally and send pulses through the arm to repair it?

NU: So, yes, these devices are placed externally on top of the fracture site. Then, electrical pulses or ultrasound signals are sent to the fracture site to stimulate bone regeneration or bone growth. And again, BGS is used during recovery, often at home.

TK: Nicole, what type of results have you seen for injured employees who have used BGS in terms of recovery?

NU: We have seen positive results when the use of BGS is introduced in the treatment plan for injured patients. Over the last several years there have been advances in the research and collection of data around the effectiveness of bone-growth stimulator devices, and it does vary. But for non-union fractures, there was a study that was published in the *Journal of Orthopedic Surgery and Research* that showed the use of electrical stimulation increased the union rate of non-union fractures by 77%, which is significant. And again, it does depend on the type of fracture, when the device is introduced in the course of treatment, all those things.

Just to cite another study, for spinal fusions, which are common in work-related back injuries, the use of bone-growth stimulator devices has demonstrated positive outcomes. *Spine,* a journal for neurosurgery professionals, reported that electrical stimulation increased the fusion rate by 35% compared to controls.

So, there is evidence that supports the effectiveness of these devices in the workers' comp space, and returning patients back to work, back to their lives, sooner and with better outcomes of proper fusion and those kinds of things.

So, the efficacy is there. Again, it's not a one-size-fits-all; it's based on the type of injury and the course of treatment.

So, someone who sustains a fresh fracture and is healthy, the best course of treatment for that patient is natural healing, right? There's no significant evidence one way or the other that a bone-growth stimulator would help or increase the speed of healing there, right?

However, for fractures where there are commonly longer delays in recovery, this is where this device really comes in and aids in the strength and recovery times overall.

TK: And, I think you might have touched on this, but is BGS something that would be recommended by a physical therapist or a case manager? Or does it always need to be prescribed by the physician before it gets any type of approval?

NU: While physical therapists and case managers can make a recommendation for the use of a bone-growth stimulator device, it must be prescribed by the treating physician, which is often an orthopedic surgeon in these cases.

TK: BGS is something that seems so new and revolutionary, but has it been around for a while? And have there been new advancements in BGS over the last few years?

NU: So, BGS has been around for a while, although there's been a more targeted focus on the efficacy of these devices. So, we've seen a lot of improvements in not only the actual units themselves but in portability and allowing them to be utilized in the home. This has made BGS more accessible and easier to use, which allows for better targeting of efficacy rates, how it's being utilized and the ability to get it to more patients. This allows for combined therapies and treatment within these non-healing fractures or sites. So, we've seen better outcomes over the last few years and compliance with patients because BGS can be performed in the home at ease of use.

TK: What are the cost benefits of using bone growth stimulators in workers' comp?

NU: If you think about a complex fracture, especially the lower extremities, if this is a work injury, you're not at work, you're off your feet. If an injured employee is not healing, naturally, the alternative is to go in for surgery, to have plates or screws added, and that is far more costly than a bone growth stimulator. And even though a bone growth stimulator is not going to prevent 100% of additional surgeries, it's an alternate treatment approach to see if you can get the bone to heal appropriately. So, there is a cost component of using BGS, but if you can't get there naturally with the bone growth, then you're looking at some type of surgery to help support that, which is obviously much more costly than a device at home.

TK: Thanks, Nicole. And you can learn more about bone growth stimulation here. We'll be back with another Enlyte Envision podcast soon. Until then, thanks for listening.

mitchell | genex | coventry