NEW TECHNOLOGY for CAREGIVERS

WHAT is fibro fog?

Advances in SPINAL CORD STIMULATION

new RELIEF for CRPS

OPIODS & ALTERNATIVES for PAIN MANAGEMENT

WHAT WE learned FROM prince

WHAT WE learned FROM PRINCE

SPECIAL FOCUS NEUROMODULATION

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Complex Regional Pain Syndrome: ViABLE PATIENT PATHWAYS TO RELIEF
Unfortunately, chronic pain is far too common. According to the Institute of Medicine\(^1\), an estimated 100 million Americans are affected by chronic pain. Neuropathic pain, including CRPS, represents one of the most prevalent yet undertreated chronic pain conditions currently facing patients today, with an estimated 3 - 4.5 percent of the global population suffering from the condition\(^2\).

Patients struggling with chronic pain may also present with co-occurring conditions affecting their quality of life such as poor sleep, inactivity, or depression and anxiety, which may strain their personal relationships\(^3\). The overall impact on American society is staggering, with health economists from John Hopkins University in Baltimore estimating that Americans spend approximately $635 billion annually on the direct and indirect costs associated with managing chronic pain\(^4\).

**CRPS: The Facts**

“Our understanding of CRPS continues to evolve,” said Dr. Timothy Lubenow, a professor of anesthesia and chief, section of pain medicine at Rush University Medical Center. “It is believed to develop along skin, nerve and skeletal muscle after trauma or injury, thought to be caused by a malfunction of the central and peripheral nervous systems that affect the way pain signals are sent from the brain and spinal cord to the rest of the body.”

Often characterized by prolonged or excessive focal pain in the limbs, CRPS can cause mild or dramatic changes in skin color and temperature, and swelling in the affected area.

There are two types of CRPS: Type I and Type II. Type I, previously called reflex sympathetic dystrophy (RSD) syndrome, occurs following an injury or illness that didn’t directly damage the nerves in the affected area\(^5\). The diagnosis of CRPS Type II, previously called peripheral causalgia, follows a specific nerve injury\(^6\).

“At this time there are no definitive tests that can confirm CRPS, although certain tests can rule out other conditions like Lyme disease or a blood clot,” said Lubenow. “Diagnosis is made by exam and review of the patient’s history and symptoms.”

Lubenow went on to explain that the disease varies in duration and severity.

“Research suggests many cases are relatively mild and patients recover gradually over time. However, in severe cases patients may require more aggressive interventions to find some measure of relief,” said Lubenow.

**CRPS Preliminary Treatments**

Similar to other chronic pain conditions, there is no single cure for CRPS, but treatment often involves a combination of approaches that can provide meaningful relief. Exercise, in the form of rehabilitation therapy, can improve flexibility, strength and blood flow\(^7\). Occupational therapy helps patients improve their functioning with daily tasks\(^8\). Psychotherapy can be critically important for chronic pain patients and their families\(^9\). According to the National Institute on Neurological Disorders and Stroke (NINDS), patients with CRPS may develop depression, anxiety or post-traumatic stress disor-
der, which can make their pain and physical rehabilitation more difficult. Some patients benefit from learning biofeedback techniques, which help them become more aware of their body and relieve pain. Medication, such as non-steroidal anti-inflammatory drugs, including aspirin, ibuprofen and naproxen may be prescribed, especially in the early stages of the disease. Topical analgesics can reduce hypersensitivity, while corticosteroids treat inflammation, swelling and edema. A sympathetic nerve block, delivered by injection near the spine, can provide temporary relief and improve blood flow for some patients. A sympathectomy is a treatment that has been recommended in the past sometimes for those who show a strong response to sympathetic nerve blocks. This has not been shown to have a good sustained long term response. As a last resort patients may try relief from intrathecal drug pumps, which place pain relieving medication directly into the fluid surrounding the spinal cord.

NEUROSTIMULATION
Spinal cord stimulation (SCS), a form of neurostimulation, is a proven therapy that has been recommended by doctors to manage chronic pain and improve quality of life. SCS systems are approved or cleared by the U.S. Food and Drug Administration (FDA) for the management of chronic pain. It has been used to manage pain that comes from failed back surgery syndrome (FBSS) or post-laminectomy syndrome and other neuopathies.

Neurostimulation, however, is not a cure for what is causing the pain and does not treat specific diseases. Instead, it is a therapy that’s designed to mask pain by blocking pain signals before they reach the brain. While neurostimulation helps most patients receive at least some reduction in pain, not everyone responds in the same way. Complications from neurostimulation may include painful stimulation, loss of pain relief, and certain surgical risks (e.g. paralysis). Patients should be sure to discuss the risks and benefits of neurostimulation with a doctor.

DORSAL ROOT GANGLION NEUROSTIMULATION THERAPY
FDA Approved for CRPS
A new type of neurostimulation, called dorsal root ganglion (DRG) therapy, received FDA approval in February 2016 for the treatment of adults with moderate to severe difficult-to-treat chronic pain caused by CRPS of the lower limbs. The DRG is a spinal structure densely populated with sensory nerves that transmit information to the brain via the spinal column. The ACCURATE IDE study demonstrated DRG therapy provided superior pain relief in patients with chronic lower limb pain compared to traditional SCS therapy.

Results from the clinical study, which is the largest study to date evaluating patients suffering from neuropathic chronic intractable pain associated with CRPS or peripheral causalgia, showed a statistically significant number of patients receiving DRG stimulation achieved meaningful pain relief and greater treatment success at three and 12 month intervals compared to patients receiving traditional SCS.

“The latest DRG therapy delivers a form of neurostimulation that stimulates the dorsal root ganglion, giving physicians the ability to directly treat the specific areas of the lower limbs where the pain occurs,” said Lubenow. “As a result, DRG therapy...”
is a unique therapeutic approach that provides pain relief to patients with neuropathic conditions who have tried multiple treatment options without receiving adequate pain relief and who are underserved by traditional SCS.”

Key outcomes from the ACCURATE IDE study include:

- **Superior pain relief:**
  Significantly more patients receiving DRG stimulation achieved pain relief and greater treatment success when compared to patients receiving traditional SCS (74.2 percent vs. 53 percent at 12 months).

- **Consistent therapy:**
  DRG Patients had an average of 81.4% reduction in their pain at 12 months.

- **Precise anatomical pain relief:**
  After receiving DRG stimulation, 94.5 percent of patients did not experience stimulation outside of their area of pain at 12 months*.

While DRG therapy offers an exciting new therapy modality to treat CRPS of the lower extremities, traditional SCS remains clinically efficacious for other types of chronic pain. Anyone interested in DRG therapy or SCS should consult with their physician to discuss therapy options and personalize their chronic pain management plan.
Although CRPS still remains somewhat unknown, there is continued research being conducted to better understand this disease. NINDS continues to support research to develop new therapies designed to limit symptoms and disability associated with CRPS. For example, earlier research suggests that inflammation related to CRPS is supported by the body’s natural immune response. According to the NINDS, researchers seeking to understand how CRPS develops want to further understand immune system activation and peripheral nerve signaling. Emerging treatments cited by NINDS include hyperbaric oxygen therapy, intravenous ketamine and low-dose intravenous immunoglobulin.

**Indications for Use:** The Axium™ Neurostimulator System is indicated for spinal column stimulation via epidural and intraspinal lead access to the dorsal root ganglion as an aid in the management of moderate to severe chronic intractable pain of the lower limbs in adult patients with Complex Regional Pain Syndrome (CRPS) types I and II. **Study subjects from the ACCURATE clinical study had failed to achieve adequate pain relief from at least two prior pharmacologic treatments from at least two different drug classes and continued their pharmacologic therapy during the clinical study.**

**Contraindications:** Patients contraindicated for the Axium Neurostimulator System are those who are unable to operate the system and are poor surgical risks. Patients who failed to receive effective pain relief during trial stimulation are contraindicated to proceed to the INS procedure. **Potential Adverse Events:** The implantation of a neurostimulation system involves risk. Patients contraindicated for the Axium Neurostimulator System are those who are unable to operate the system and are poor surgical risks. Patients who failed to receive effective pain relief during trial stimulation are contraindicated to proceed to the INS procedure.

**CHANGING THE FACE OF CRPS WITH DRG THERAPY**

Patients with CRPS are often underserved by conventional medical management and many interventional pain procedures. The recent approval of DRG therapy ensures these patients have access to a superior therapeutic approach for managing difficult-to-treat chronic pain of the lower limbs in adult patients with CRPS.

Discover more and find a DRG pain specialist near you by visiting [www.sjm.com/painpathways](http://www.sjm.com/painpathways).

**CITATIONS**

September’s PAIN AWARENESS MONTH MARKS THE KICKOFF FOR NEW ACPA TOOL KIT: PARTNERS FOR UNDERSTANDING PAIN

During September’s Pain Awareness Month, Partners for Understanding Pain, a consortium of organizations that touch the lives of people with chronic, acute and cancer pain spearheaded by the American Chronic Pain Association and its 60 partner organizations, has developed a tool kit of valuable resources focused on a variety of pain issues with the goal of educating both health care providers and consumers at all levels of treatment and therapy. The tool kit includes a repository of resources offered by partners on their web pages.

ACCESS THE TOOLKIT AT: HTTPS://THEACPA.ORG/UPLOADS/HEALTH_CARE_PROFESSIONAL_TOOL_KIT_2016.PDF

NEW FULL-BODY MRI-SAFE PAIN RELIEF SYSTEM

The new Precision Montage spinal cord stimulation is a new advancement in neuromodulation pain therapy. As the only system to deliver relief while still allowing patients access to full-body MRI scans, the Precision Montage MRI couples full-body scan access with the most advanced programming to provide excellent pain relief.

FOR MORE INFORMATION: WWW.BOSTONSCIENTIFIC.COM

BONE-LOSS MEDICATIONS may be worse than no treatment

A new study shows that the most common medications (bisphosphonates, including Fosamax® and Boniva®) used for treatment of hyperparathyroidism, a condition that causes bone loss, may actually increase risk of fractures. The study of 6,000 people with hyperparathyroidism found that those treated with bisphosphonates suffered hip fracture at the rate of 86 per 1000. Those who had parathyroid surgery reported 20 fractures per 1000, and those who were not treated at all recorded 56 fractures per 1000.

FOR MORE INFORMATION: WWW.NEWWISE.COM/ARTICLES/VIEW/651040/?SC=DWHP

PROMISING RESULTS for PHANTOM LIMB PAIN

A clinical trial using a technique called cryoablation—the application of extreme cold—shows good results for those suffering from phantom limb pain (PLP) resulting from amputation. Almost 185,000 people undergo amputations each year in the US, whether resulting from combat wounds, diabetes or other medical conditions. Researchers for this clinical trial believe that cryoablation freezes the nerves and scar tissue at the amputation site, reducing nerve signals to the brain and lowering pain levels.

FOR MORE INFORMATION: WWW.HEALTHNEWSLINE.NET/NEW-COLD-BLASTS-TECHNIQUE-MAY-EASE-PHANTOM-LIMB-PAIN-AMPUTEES/2535129/
A DIFFERENT APPROACH.
PAIN RELIEF DESIGNED FOR YOU.

Imagine finally finding relief. Do you suffer from chronic pain in specific areas such as the foot, knee, hip or groin but have not been helped by traditional treatment? A new chronic pain therapy offered exclusively by St. Jude Medical may be for you. It is the only FDA-approved neurostimulation therapy clinically proven to relieve difficult-to-treat chronic pain in specific areas, and it works by stimulating a cluster of nerves called the dorsal root ganglion (DRG). Take a different approach with DRG therapy to help find relief, so you can enjoy the simple things in life again.

While neurostimulation helps most patients receive at least some reduction in pain, not everyone responds in the same way. Complications include painful stimulation, loss of pain relief and certain surgical risks (e.g., paralysis). Be sure to discuss the risks and benefits of neurostimulation with your doctor.

DISCOVER MORE and find a DRG specialist near you at sjm.com/painpathways