

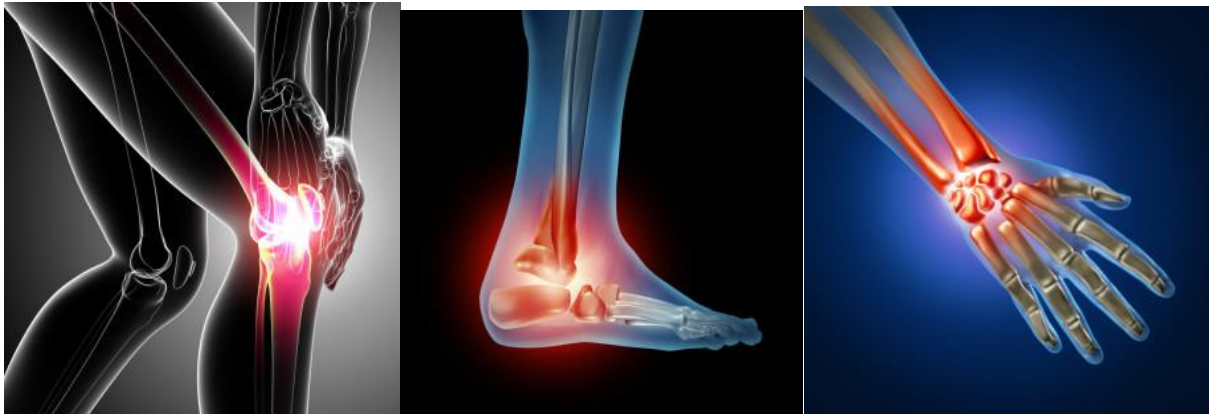
## CRPS and RSD

A chronic neurological pain condition that is characterized by severe pain, increased sweating and heightened sensitivity to touch is known as Complex Regional Pain Syndrome or CRPS. There are two types of CRPS, known as Type I and II. Both result in chronic pain, but the cause of the pain is generally much different.

The previous term for this type of sympathetic nerve pain was Reflex Sympathetic Dystrophy (RSD), also known as Sympathetically Maintained Pain (SMP).

### What is CRPS?

CRPS stands for chronic regional pain syndrome and is thought to be the result of malfunctioning in the central and peripheral nervous systems. In previous years the condition was referred to as causalgia or RSD, but has now been grouped into two categories and renamed CRPS.



The crux of the problem is over activity of the sympathetic nervous system, which can be increased by any number of reasons. This may include a fall, a surgery, overuse or a traumatic incident such as a gunshot. Why it occurs in some people and not others is unknown. It leads to pain that is way out of proportion to the injury sustained. This is not to say the patient is faking the problem at all. It is very real, and difficult to treat.

The problem may be seen in any extremity, most commonly in the knee. However, the hand and wrist are also common.

The National Institute of Health continues to do research on this poorly understood condition that results in chronic pain for its sufferers. There is no cure, but treatment is viable and helpful in improving the symptoms associated with CRPS. New treatments are currently being assessed, along with studies of current and traditional treatment that is conservative in nature but showing positive outcomes for patients.

## What Causes CRPS?

It is currently poorly understood what causes CRPS and why it happens in certain people. The sympathetic nervous system is believed to play a significant role in sustaining the pain, but in some modern tests other theories have surfaced.

There does not seem to be one single cause that acts alone in the development of CRPS in a patient. Research shows that several causes may be working in combination with one another. From pain receptors to dysfunction of the central nervous system, several variables may come into play.

As mentioned, it may occur after a simple surgery like a carpal tunnel release or a knee arthroscopy, or after a fall on the knee. Sometimes it's hard to even remember what led to the intense pain.

## What are the Symptoms of CRPS?

Both types of CRPS exhibit similar symptoms and characteristics; however, the timing for recognized characteristics changes. Burning sensations, extreme pain, changes in skin color and excessive sweating are all characteristic of CRPS.

Type I or Stage I CRPS lasts about one to three months and often reveals painful limbs that swell and stiffen, while the skin changes color. The second type of CRPS lasts from three to six months and symptoms gradually worsen. The bones weaken and soften, pain intensifies, and significant muscle tone is lost.

The condition can be debilitating and it is important to see a pain management specialist right away to help prevent the progression of the condition. Early detection offers a more favorable outcome for the patient.

## Is There Treatment for CRPS and RSD?

Yes, there is treatment for this condition. While there is no cure, the goal of treatment is to relieve the painful symptoms experienced by the patient so that normal activities and daily routines can be carried out. The desire is to "break the cycle" of sympathetic nervous system over activity. But it may take different treatments for different patients to make that happen.

A variety of therapy options are available to relieve pain and discomfort:

- **Medications**

One of the more conservative and traditional treatments for CRPS is medication. Analgesic drugs are used to help relieve pain. The medication acts locally on the nerves that cause pain in the skin and muscles. Some of these drugs may include opioids, antidepressants, anti-seizure medication and corticosteroids.

Additional medications that can help may include anti-depressant medications and neurogenic stabilizers, such as Lyrica or Neurontin. It is unknown how they work for RSD and CRPS, however they often do, so are used off-label to help.

- **Physical Therapy**

Various treatments of physical therapy can be extremely beneficial to a patient with CRPS. Physical therapy can relieve painful symptoms that restrict mobility and flexibility. The goal of physical therapy is to reduce pain and restore function while improving range of motion within limbs or particular parts of the body.

Exercise that is gradual helps to improve strength and make movements easier. Therapists may implement “desensitization” to help break the cycle of sympathetic over activity.

- **Spinal Cord Stimulator**

Spinal cord stimulation involves the insertion of tiny electrodes that stimulate the spinal cord in an effort to reduce pain. The electrodes provide a tingling sensation to the affected painful area, which provides relief in most cases.

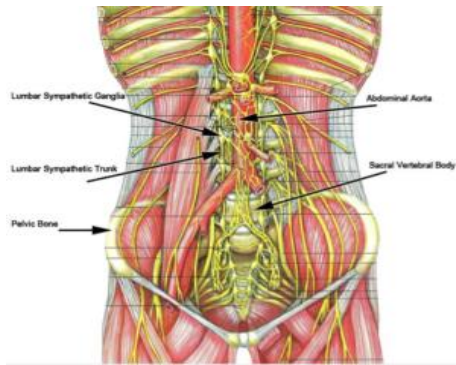


A spinal cord stimulator may provide excellent relief for the pain from RSD & CRPS.

While ongoing research continues, patients who use this form of treatment for CRPS exhibit positive outcomes, reporting a decrease in pain (Erwin, AAOHN, 2008). Notably, a spinal cord stimulator doesn't heal anything, but it can mask pain very well and restore a lot of function.

- **Lumbar Sympathetic Nerve Block or Stellate Ganglion Block**

A nerve block is designed to provide significant pain relief. Sympathetic nerve blocks are often used on patients with CRPS and painful symptoms associated with the condition. For the lower extremities, this would be a lumbar sympathetic block. For an upper extremity problem, this includes a stellate ganglion block.



The lumbar sympathetic chain is located in the upper lumbar area.

The procedures are low risk and performed as an outpatient. Usually numbing medicine is injected along with either corticosteroid or phenol, which can significantly lengthen the duration of pain relief for 3 to 12 months. Further research is looking at the use of radiofrequency ablation to help lengthen the duration or pain relief even more.

Other forms of treatment are available after conservative care has been exhausted with little to no improvement. It is important to keep your pain management specialist informed of your symptoms and progress so that the proper treatment program can be established and modified if needed.

### **What is the Prognosis of CRPS?**

The prognosis and outcome following treatment varies from patient to patient. While the goal of treatment is to improve symptoms and reduce pain, not everyone has the same result. In some cases, spontaneous remission occurs, while in others spontaneous unremitting symptoms may arise. When the symptoms return, they often do so with a vengeance, crippling or disabling the patient.

Clinical studies show that treating the condition early on is more favorable for the patient because the disorder becomes limited in progress (Harden et al., *Oxford Journals of Health*, 2001).

The biggest research study evaluating RSD/CRPS outcomes showed if therapy was started in the initial 2 years of onset that eighty percent achieved a really good outcome. As the time increased past 2 years the results got worse and dropped to seventy percent success (Poplawski et al, JBJS, 1983). After 5 years the chance of success was only 10-20%.