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## **Complex Regional Syndrome: How To Avoid or Treat It.**

In this handout, we discuss a condition called complex regional pain syndrome, also known as CRPS. CRPS can happen after a painful injury such as a fracture, after surgery, or occasionally after receiving a platelet-rich plasma or PRP injections. We will discuss how to recognize it, what things we can do to try to prevent it, and how to treat it if it does happen.

### What is complex regional pain syndrome (CRPS)?

CRPS is a condition that can cause burning nerve pain and swelling in the limbs. It can happen after injuries, fractures, surgeries, and occasionally after PRP injections. This condition is not completely understood. However, we believe it is a problem where the nerve signals become unregulated and cause an inappropriate feeling of pain, even when the painful stimulus is gone.

### What are symptoms of CRPS?

Symptoms of CRPS can often include:

Nerve pain, which can often be described as burning, stinging, tingling, pins and needles. Patients may also experience hypersensitivity to touch. For example, anything brushing against the area in which you received the PRP injection, such as clothes or your bedsheets, may cause sensitivity or pain.

Your affected arm may also feel either colder or warmer than usual.

You may also experience abnormal swelling in the affected body part.

Skin changes may also occur, such as color changes, temperature changes, thicker skin, and sweating.

### Can I prevent CRPS?

It is important to try to prevent CRPS as much as possible.

There are several studies that support the use of 500 mg of Vitamin C daily.

Also, resuming use of the arm for normal daily activities helps to avoid immobilization of nerves, which is a risk for CRPS.

Additionally, gentle stimulation of the areas around the procedure site can help to distract the central nervous system from the pain signal loop. This consists of lightly massaging a wide area of skin that surrounds the procedure site. For example, after a tennis elbow PRP injection, you would want to massage the arm and forearm areas above and below the injection site.

### In the case that I do get CRPS, how is it treated?

It is important to recognize CRPS symptoms as soon as they arise to be able to begin treatment immediately.

We use a combination of treatments to manage CRPS.

First, we start treatment with a nerve-calming medication called Gabapentin, also known as Neurontin. We usually recommend you take this medication before you go to sleep because it can make you drowsy.

We recommend that you start by taking 1 tablet (which is usually 100 mg per tablet), once daily at bedtime. If it helps, you may take up to 6 tablets (or a total of 600 mg) spread throughout the day. Do not combine this medication with narcotic medications, as taking these medications concurrently may decrease your respiratory ability.

Additionally, we send patients to occupational therapy to work on specific distraction therapy and desensitization exercises. Giving the brain lots of non painful stimuli can distract the brain from the signals from the overactive nerves. We encourage and recommend you move and use the hand, elbow, and shoulder.

You can also do home treatments, such as, rubbing the skin of the arm and occasionally running the arm under water or applying topical capsaicin cream or biofreeze, which can cause a mild tingling sensation. We also recommend supplementing with a daily multivitamin that includes Vitamin C, which is good for nerve health.

In severe cases, we may need to refer patients who do not improve with the management we already discussed to a pain management provider for selective nerve blocks. This can help relieve pain and calm the nerves.

I hope this information helps you to understand complex regional pain syndrome, how to avoid it, and how to treat it if it does happen. Please do not hesitate to contact us with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger Sohn". The signature is written in a cursive style with a large initial "R" and "S".

Roger Sohn, MD