

# Complex Regional Pain Syndrome

## WHAT IS IT?

Complex regional pain syndrome (CRPS) is a chronic pain condition that is believed to be the result of dysfunction in the nervous system. Typical features include changes in the colour and temperature of the skin over the affected part, accompanied by intense burning pain, skin sensitivity, sweating, and swelling.

CRPS I is frequently triggered by tissue injury; the term describes all patients with the above symptoms but with no underlying nerve injury.

CRPS II experience the same symptoms but their cases are clearly associated with a nerve injury. Older terms used to describe CRPS are "reflex sympathetic dystrophy syndrome" and "causalgia".

CRPS can strike at any age and affects both men and women, it is more common in women.

The key symptom of CRPS is almost continuous, intense pain in proportion to the severity of the injury (if an injury has occurred), which gets worse rather than better over time. CRPS most often affects one of the extremities (arms, legs, hands, or feet).

The pain can spread to include the entire arm or leg. Pain can sometimes even travel to the opposite extremity. It may be heightened by emotional stress. The symptoms of CRPS vary in severity and length.

Doctors aren't sure what causes CRPS. In some cases the sympathetic nervous system plays an important role in sustaining the pain. The most recent theories suggest that pain receptors in the affected part of the body become responsive to a family of nervous system messengers known as catecholamines.

Another theory is that post-injury CRPS (CRPS II) is caused by a triggering of the immune response, which leads to the characteristic inflammatory symptoms of redness, warmth, and swelling in the affected area. CRPS may therefore represent a disruption of the healing process. In all likelihood, CRPS does not have a single cause, but is rather the result of multiple causes that produce similar symptoms.



## SYMPTOMS?

- "Burning" pain
- Increased skin sensitivity
- Changes in skin temperature: warmer or cooler compared to the opposite extremity
- Changes in skin colour - often blotchy, purple, pale, or red
- Changes in skin texture – shiny and thin, and sometimes excessively sweaty
- Changes in nail and hair growth patterns
- Swelling and stiffness in affected joints
- Motor disability, with decreased ability to move the affected body part

## PROGNOSIS?

The prognosis for CRPS varies from person to person. Large improvements in symptoms occurs in certain people. Others can have unremitting pain and crippling, irreversible changes in spite of treatment.

## HOW IS CRPS DIAGNOSED?

CRPS is diagnosed primarily through observation of the signs and symptoms. But because many other conditions have similar symptoms, it can be difficult for doctors to make a firm diagnosis of CRPS early in the course of the disorder when symptoms are few or mild. Or, for example, a simple nerve entrapment can sometimes cause pain severe enough to resemble CRPS. Diagnosis is further complicated by the fact that some people will improve gradually over time without treatment. Since there is no specific diagnostic test for CRPS, the most important role for testing is to help rule out other conditions. Some clinicians apply a stimulus (such as touch, pinprick, heat, or cold) to the area to see if it causes pain. Doctors may also use bone scans to identify changes in the bone and in blood circulation.



## HOW IS CRPS TREATED?

Because there is no cure for CRPS, treatment is aimed at relieving painful symptoms so that people can resume their normal lives. The following therapies are often used:

- **Physical therapy** - a gradually increasing exercise program to keep the painful limb or body part moving may help restore some range of motion and function.
- **Bracing and splinting** - may help with function and range of motion.
- **Psychotherapy** - CRPS often has profound psychological effects on people and their families. Those with CRPS may suffer from depression, anxiety, or post-traumatic stress disorder, all of which heighten the perception of pain and make rehabilitation efforts more difficult.
- **Sympathetic nerve block** - some patients will get significant pain relief from sympathetic nerve blocks. Sympathetic blocks involve placement of an anesthetic next to the spine to directly block the sympathetic nerves. There are nerve blocks for the arms or legs as well (guanethidine).
- **Medications** - many different classes of medication are used to treat CRPS, including topical analgesic drugs that act locally on painful nerves, skin, and muscles; antiseizure drugs; antidepressants, corticosteroids, and opioids.
- **Oedema management** – reducing swelling often helps.
- **Combination treatments**

**BPRS**

Brisbane Pain  
Rehabilitation Service

We believe a multidisciplinary intensive structured program such as Brisbane Pain Rehabilitation Service, offers the best likelihood of symptom reduction, psychological gain and return to work and social activity. Normally this will involve some medical procedures 2 weeks of intensive treatment and a follow up program.