**CRPS** (formerly known as RSD, Sudek’s atrophy or Causalgia)

**The Basics:** Typical hallmark of this syndrome is severe, spontaneous pain associated with local features of autonomic dysfunction that occurs after trauma or operation to a limb. The associated signs and symptoms are considered an exaggerated response to injury that has variable expression among individuals. Potentially, it can become a devastating, progressive disorder that may lead to significant disability, emotional disturbance, and irreversible trophic changes to the extremity. This syndrome is composed of a group of heterogeneous neuropathic conditions that are widely recognized in their chronic state but are poorly understood. CRPS usually results from incomplete nerve trauma or ST injury and most commonly affects the hands and feet. The **five** major components are: pain out of proportion to the injury, edema, autonomic dysfunction, movement disorder, and trophic changes.

**Statistics:** M=F, usually after 50 yrs old, Type A personality

**2 Types:**
- **Type 1 (RSD)** – no specific nerve damage identified
- **Type 2 (Causalgia)** – a distinct major nerve injury has occurred

**3 Stages:**
- **Stage 1 (Acute Stage)**
  Localized pain & edema, Hyperesthesia, Allodynia, Muscle spasm & joint stiffness, Vasospasm. *Average duration 3 months.*
- **Stage 2 (Dystrophic Stage)**
  Increase in severity of pain & involvement, Brawny edema & skin motteling. Affected limb may feel cool to touch and appear bluish in color, hair loss, brittle nails, Muscle Stiffness, Spotty Osteopenia. *Develops 3-6 months after onset.*
- **Stage 3 (Atrophic Stage)**
  Trophic changes, skin is cool & shiny, pain becomes intractable, muscle atrophy & weakness, joint weakness, contracture of flexor tendons.

**Treatment:**
- The goals of treatment are pain management & rehabilitation
- Drug Therapy (NSAIDs and opiates)
- Nerve Blocks
- Physical Therapy – mainstay
- **Spinal Cord Stimulation**
- Neurectomy/lysis
- Psych consult
- <50% response rate if stage 3

**Key: Early Recognition & Treatment**
MOA of Sinal Cord Stimulation:

The Spinal Cord Stimulation is a procedure that uses an electrical current to treat chronic pain. A small pulse generator, implanted in the abdominal or buttock region, sends electrical pulses to the spinal cord. These pulses interfere with the nerve impulses that make you feel pain.

In neuropathic pain states, it alters the local neurochemistry in dorsal horn, suppressing the hyperexcitability of the neurons. It increases GABA release, serotonin, and perhaps suppression of levels of some excitatory amino acids, including glutamate and aspartate.

In the case of ischemic pain, analgesia seems to derive from restoration of the oxygen demand supply. This effect could be mediated by inhibition of the sympathetic system, although vasodilation is another possibility.

References:


“Complex Regional Pain Syndrome” lecture, Dr. Latva – Associate Professor Department of Podiatric Surgery and Applied Biomechanics at SCPM.