

Chronic Regional Pain Syndrome

Chronic Regional Pain Syndrome (CRPS) is defined as an excessive response of an extremity to injury. Symptoms are out of proportion to the extent of the injury and often progress beyond the original site of injury with pain radiating proximally.

A natural progression of the CRPS process has been described by Lankford:

Stage 1—A hot erythematous swollen extremity

Stage 2—A cold, cyanotic limb with progressive trophic changes

Stage 3—An extremity with fixed fibrotic change and atrophy

Several theories have been developed relating to the mechanism that produces CRPS. Lankford proposes that three conditions must occur before a patient can develop CRPS. These conditions include:

- I. Persistent, painful lesion
- II. Diathesis
 1. Personality traits—lability, fearfulness, insecurity, manipulativeness, dependency on medical personnel and family, tendency to blame others for their condition
 2. Hypersympathetic tendencies—history of hyperhidrosis, poor bilateral capillary refill, fainting, excessive blushing, migraine headache, excessive coolness in fingertips
- III. Abnormal sympathetic reflex—The normal response to injury begins with a rapid vasoconstriction of the arteries to reduce bleeding followed by vasodilation. In CRPS, this normal sympathetic reaction to the injury does not shut down, but accelerates through the production of ischemia producing increased pain and increased afferent firing.

Common characteristics of CRPS syndrome include:

- Intense or prolonged pain
- Swelling
- Stiffness and fibrosis
- Vasomotor and pseudomotor disturbances
- Delayed functional recovery
- Associated trophic changes
- Osteoporosis