



# Orthopaedic Protocols

## Reflex Sympathetic Dystrophy [RSD]

### Initial Evaluation:

- A comprehensive initial evaluation should be administered with any patient referred with the diagnosis of reflex sympathetic dystrophy. The assessment should include: pain, edema, range of motion & psychosocial issues (current or past). [Refer to condensed version of pain evaluation].
- Therapy for RSD should address pain, edema, hypersensitivity & range of motion (ROM). The entire therapy program *must* be kept within the patient's comfort level.

### Pain Management:

- Pain management should be the first consideration. Treatment modalities that may be beneficial in managing the abnormal pain pattern include: manual desensitization exercises, manual therapy, high or low rate transcutaneous electrical nerve stimulation (TENS), &/or fluidotherapy. TENS is *not* recommended when the initial injury included a nerve injury. TENS seems to aggravate/irritate the nerve more than it is helpful.

### Edema Control:

- Edema control should be initiated and may consist of elevation, light compressive dressings, an Isotoner glove, elastic stockinettes, fingersocks or Coban.
- Active range of motion (AROM) exercises may assist in reducing the edema along with helping moderate the pain.

### Splinting:

- Assuming ROM is limited in the hand, a safe position splint is fitted to wear between exercise sessions & at night. The purpose of the splint is to avoid the pain reflex position of MP joint extension & IP joint flexion, & to avoid developing a thumb web space contracture.
- Static & gentle dynamic splinting may be initiated to enhance overall ROM of the extremity. It is critical that the splinting program be balanced to achieve full ROM yet honor the pain. No dynamic splints should be applied to the hand that applies undue pressure on the joints and heightens pain. It can prove to be a challenge to balance the exercise & splinting program to achieve progress, while honoring the patient's pain.

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### **ROM Exercises:**

- Active & gentle PROM exercises may be initiated. It is particularly important for all exercises to be performed slowly & within the patient's comfort level. Emphasis should begin with gentle ROM exercises to the neck & shoulder girdle. Shoulder exercises should be included along with the elbow, forearm, wrist & hand, irregardless of the level of injury or surgery.
- It is important to emphasize functional activities in the treatment program, as many patients will position their arm in a protective position, avoiding functional use. Emphasis on functional use will redirect the attention of the patient from the pain & the dysfunction to a more normal level of functioning.
- As the patient's pain begins to subside, the ROM exercises & necessary splinting may be increased to better mobilize joint limitations

### **Strengthening:**

- Progressive strengthening may be initiated so long as the edema is at a minimum & it does not increase the patient's level of pain.

### **Modalities:**

- It is important to not use extremes of temperature as adjuncts to the patient's therapy program. With RSD there is an abnormal vasomotor response; therefore, the use of heat & cold will likely heighten the problem.

### **Dystrophile Program:**

- A stress loading program has been developed by Dr. Kirk Watson to favorably influence RSD. The program is performed by loading the extremity with compression and distraction of the joints. A number of patients have found relief with performing the dystrophile stress loading program.

Information on the Dystrophile Program may be obtained by contacting:

The Joint Jack Company  
108 Britt Road  
East Hartford, CT 06118  
(860) 568-7338

### **Psychosocial Consideration:**

- High anxiety, depressed, self-dependent individuals (i.e widows, divorcees) appear to be more susceptible to developing RSD. Why this plays into developing RSD is not understood.
- Patients may benefit from the intervention of a rehabilitation psychologist to deal with the pain, anxiety, depression & functional limitations secondary to the RSD.

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### Stellate Ganglion Blocks:

- Physicians may choose to use stellate ganglion blocks as an adjunct to therapy. In addition, physicians are known to prescribe anti-anxiety & anti-depressant medications to complement the conservative management program.
- When stellate ganglion blocks are performed, the extremity loses sensory & frequently, motor control. During the 6-12 hours, when the individual is under the stellate ganglion block, there is an opportunity to gently mobilize the extremity. Any patient who has received a stellate ganglion block should activity participate in therapy within an hour following the block. It is important to realize the patient may have difficulty swallowing following a stellate ganglion block. Therefore, it is *not* recommended the patient be provided with liquid during the time in therapy.