

# EVALUATION OF STATIC PROGRESSIVE STRETCH FOR THE TREATMENT OF WRIST STIFFNESS

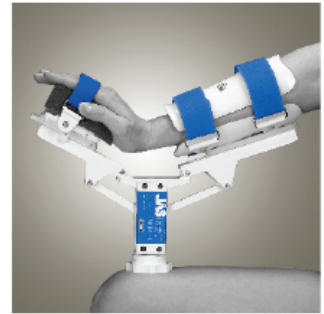
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Decreased wrist range of motion (ROM) after trauma or surgery can be a challenging problem. Physical therapy, splinting and additional surgical interventions may not restore desired ROM or function. The purpose of this study was to assess ROM and satisfaction scores of patients with wrist stiffness that were treated with a patient-directed static progressive stretch (SPS) orthosis.

This prospective study reported on 47 consecutive patients who experienced post-traumatic or post-surgical wrist stiffness and were treated with an SPS orthosis. Mean total wrist ROM increased by 35°, mean flexion by 17° and mean extension by 18° after a mean of 10 weeks. Patients who began the treatment within 16 weeks of injury experienced a significantly greater gain in ROM (by 13°) compared with patients who began treatment 16 weeks or more after injury. All patients completed the treatment and there were no complications reported with use of the device.



### Subjects

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- 47 patients with post-traumatic or post-surgical wrist stiffness.
- Experienced a plateau in ROM gains after a mean of 12 weeks of physical therapy.

### Methods

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- Patients began use of SPS orthosis (Joint Active Systems, Effingham, Ill.) when ROM plateau was determined by treating therapist. No other treatment was employed during the period of splinting.
- Patients were instructed to perform three 30-minute SPS sessions per day, per direction of motion loss.
- SPS orthosis use was stopped when no ROM increases occurred for seven consecutive days, or when patient and physical therapist determined that satisfactory functional ROM had been attained.
- Duration of treatment, wrist ROM, satisfaction and complications were measured.

### Results

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- Mean duration of treatment was 10 weeks.
- Mean total wrist ROM increased by 35°, mean wrist extension increased by 18° and mean wrist flexion increased by 17°.
- Mean satisfaction index score was 8.2 (range: 0 to 10 points).
- All patients completed treatment.
- There were no reports of injuries, skin irritation, nerve palsies or any other complications from SPS orthosis use.

### Conclusions

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- All patients, with various etiologies of stiffness, experienced gains in ROM; there were no complications and patient satisfaction was high.
- SPS orthosis therapy is a useful treatment for improving wrist ROM in patients who have plateaued after a course of conventional therapy.



**Full Study Available.**

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