

## CLINICAL OVERVIEW

### PATIENT SATISFACTION OUTCOMES OF STATIC PROGRESSIVE STRETCH BRACING: A 10-YEAR PROSPECTIVE ANALYSIS

Full study appeared in *Annals of Translational Medicine*. 2018. doi: 10.21037/atm.2018.08.31  
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Adjunctive stretch bracing can provide optimal therapy to restore functional range of motion (ROM) for most patients suffering from shoulder, elbow, forearm, wrist, knee and ankle stiffness. Three commonly used bracing mechanisms include static progressive stretch (SPS), turnbuckle, and dynamic splinting. Although in general, these three brace types have been shown to have successful outcomes, there are a number of different manufacturers, and company specific designs might affect outcomes. The purpose of this study was to analyze 10 years of prospectively collected patient satisfaction and outcomes data from a single brace company. Authors specifically evaluated mobility, pain, stiffness, swelling and any adverse events of patient's treatment with an SPS brace.

#### Methods

- Data from 167,751 patients treated from 2007 to 2017 with a JAS Brace (Joint Active Systems, Inc., Effingham IL, USA) was prospectively collected.
- 6000 patients (50 per month) were randomly and prospectively selected to complete the survey.
- Survey questions assessed patient perceived outcomes regarding stiffness, swelling, pain and improvement in mobility as a result of JAS brace therapy.
- All patient complaints and device related serious injuries for the 10 year period were tabulated.
- Data was graphed and a yearly trends analysis was performed.

#### Results

- Stiffness: Yearly trends indicate a decrease in stiffness after JAS brace use; 45% of patients reported no stiffness after using the brace in 2008, while 84% did so in 2013.
- Swelling: Yearly trends indicate an increase in patients reporting no joint swelling after JAS brace use; 79% reported no swelling after using their brace, while 84% did so in 2018.
- Pain: Yearly trends revealed an increase in percentage of patients reporting no pain after JAS Brace use; 59% reported no pain after using their brace in 2008, while 70% did so in 2013.
- Mobility: From 2008 to 2016 a mean of 90% of patients reported improved mobility after JAS brace use, and this percentage remained fairly constant; less than 10% of patients reported no improvement in mobility.
- Total Complaints: The total number of complaints from all patients using a JAS brace trended downward over the 10 year period; from 38 complaints in 2007, to 3 complaints in 2017.
- No patients experienced any JAS device related serious injuries from 2007 to 2017.

#### Conclusions

- Patients managed with a JAS SPS brace over the past 10 years experienced decreased pain, stiffness and swelling after orthosis treatment.
- Patients also experienced a steady increase in mobility with JAS SPS orthosis treatment.
- There were no reports of serious injury and a trend towards a reduced number of complaints in 167,751 patients treated with a JAS SPS brace over a 10 year period.
- Based on study results of 167,751 subjects, patients suffering from extremity joint motion loss can expect excellent clinical outcomes using any of the analyzed ROM therapy braces.

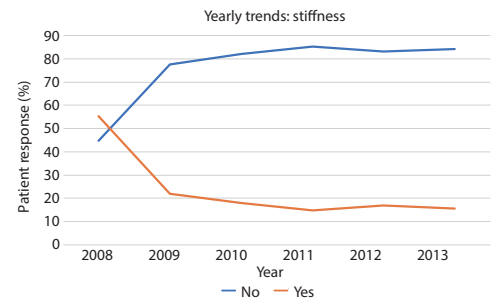


Figure 1 Yearly trends in stiffness response.

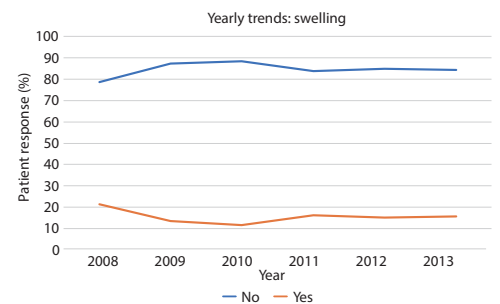


Figure 2 Yearly trends in swelling response.

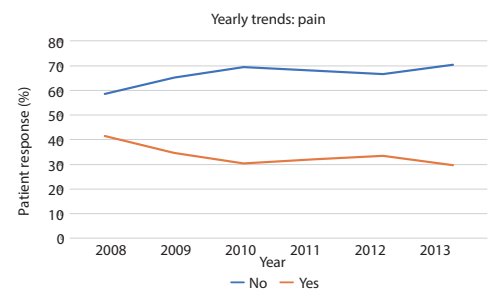


Figure 3 Years trends in pain response.



Full Study Available  
Please contact JAS at 800-879-0117 or [info@jointactivesystems.com](mailto:info@jointactivesystems.com)