



**BRACING IN THE UNITED STATES
&
THE SRS INCLUSION AND ASSESSMENT CRITERIA FOR FUTURE BRACING AIS
STUDIES**

MAKING COMPARISON AMONG STUDIES MORE VALID AND RELIABLE

Spinal Orthoses

CTLSO

- Milwaukee

TLSO – TLSO

- Custom molded
- Boston
- Wilmington

DYNAMIC

- SpineCor

Night time orthoses

- Providence
- Charleston

Literature Problems

Inconsistent treatment criteria

Compliance: ↓ more mature patient

↓ males

other factors

Weaning criteria

Follow-up duration

Success criteria: Exclusion of non-compliance patients

Final curvature $\leq 5^\circ$, $\geq 6^\circ$, $\geq 10^\circ$ progression

SRS INCLUSION CRITERIA

1. Age at bracing – 10 years and older
2. Primary curve 25-40 °
3. Risser sign 0, 1 or 2
4. No prior treatment
5. Females – Premenarchal or one year postmenarchal
6. Include all patients regardless of compliance ('intent to treat')



SRS ASSESSMENT CRITERIA

1. % of curve progressed 5° or less; 6° or more at maturity
2. % of patients who progressed beyond 45°
3. % of patients that had surgery or recommended for surgery
4. minimum 2 years follow-up after maturity for 'successful' patients

RESULTS

RESULTS 25 TO 40 DEGREES				
	TLSO*	PROVIDENCE*	SPINECOR [§]	
Population	48	35	47	170
	At 2 yrs follow-up	At 2 yrs follow-up	At 2 yrs follow-up	At weaning point
≤ 5° progression	7 (15%)	11 (31%)	45 (96%)	101 (59%)
Progression ≥ 6°	41 (85%)	24 (69%)	2 (4%)	69 (41%)
Progressed ≥ 45°	27 (56%)	15 (45%)	4 (9%)	2 (1%)
Surgery	38 (79%)	21 (60%)	1 (2%)	39 (23%)
* Janicki JA, Poe-Kochert C, Armstrong DG, Thompson GH. A Comparison of the Thoracolumbosacral Orthoses and Providence Orthosis in the Treatment of Adolescent Idiopathic Scoliosis: Results Using the New SRS Inclusion and Assessment Criteria for Bracing Studies. J Pediatr Orthop. 2007 Jun; 27(4):369-374.				
§ Coillard C, Vachon V, Circo AB, Beausejour M, Rivard CH. Effectiveness of the SpineCor Brace Based on the New Standardized Criteria Proposed by the Scoliosis Research Society for Adolescent Idiopathic Scoliosis. J Pediatr Orthop. 2007 Jun; 27(4):375-379.				

CONCLUSION

- New SRS criteria is more restrictive.
- TLSO is minimally effective in the treatment of AIS.
- Providence orthosis appears to be effective but primarily for small curves (relate to Janicki et al's article for further details).
- SpineCor is effective for the treatment of AIS. Moreover, positive outcomes are maintained after 2 years post-bracing.