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## Exercises during brace weaning can reduce loss of correction in Adolescent Idiopathic Scoliosis (AIS) patients

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### Background

Exercises are sometimes prescribed to avoid collateral effects of bracing and to improve brace efficacy. A loss of correction during brace weaning in AIS treatment is quite frequent, and the efficacy of exercises to prevent this loss has never been studied.

### Purpose

To verify the efficacy of exercise in the reduction of correction loss during brace weaning.

### Design

Retrospective control study.

### Population

Sixty eight consecutive patients (8 males), age  $15 \pm 1$  and Cobb Angle  $22 \pm 2^\circ$  at start of brace weaning.

### Methods

Patients were evaluated clinically and radiographically at start of brace weaning (defined as the first visit in which the brace was prescribed less than 18/24 h) and end of treatment. Patients were divided into 4 groups according to the exercises they performed: SEAS (14 treated according to ISICO protocol), OTH (25 treated according to other protocols), DIS (19 who didn't exercised continuously), and CON (10 who didn't exercised at all). The ANOVA, Wilcoxon and post hoc t tests were performed.

### Results

There were no baseline as well as final differences among groups. However, during weaning Cobb angle progressed

(worsened) significantly both in DIS and CON ( $+3.9^\circ$  and  $+3.1^\circ$ ) while SEAS and OTH didn't show any significant change. Comparing single groups, SEAS and OTH with respect to DIS had a significant difference ( $P < 0.05$ ).

### Conclusion

Exercises (SEAS and OTH) can help reduce correction loss experienced during weaning from the brace for AIS.

### References

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