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1: [Stud Health Technol Inform.](#) 2008; 140: 303-6.



Clinical and postural behaviour of scoliosis during daily brace weaning hours.

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What happens to scoliosis when the brace is daily weaned is not described in the literature, even if this can have a significant clinical impact. Our aim was to evaluate the postural and clinical changes at brace weaning. We developed a pre-post trial in 10 adolescent idiopathic scoliosis female patients 12.6 years old, with 42.8+/-7.4 degrees Cobb curves. Inclusion criteria: more than 30 degrees Cobb; TLSO worn at least 20 hours/day. Patients have been divided according to the hours of brace weaning per day: group 23H (6 patients, 23 hours per day) and group 20H (20-21 hours per day). We evaluated the patients at brace weaning and every hour per 4 hours, clinically (Bunnell degrees, hump and plumbline distances through usual clinical instruments) and posturally (scoliosis degree), by means of a non-ionising instrument that allow a 3D reconstruction of the spine. Paired ANOVA and t-test were used for statistical analysis. Group 23H showed statistically significant variations in 1 to 3 hours in all clinical parameters, and a tendency to progression of scoliosis. Group 20H did not show any statistically significant variation in 4 hours, a part from slight improvements. These results could be explained in terms of scoliosis reactions to usual/unusual daily load on the spine. Moreover, these data show the possible existence of the "concertina effect" due to brace weaning, and the importance of standardizing clinical examination with respect to the daily brace weaning hours.

PMID: 18810041 [PubMed - in process]

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