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Title
The Sagittal Realignment Brace in the Treatment of Chronic Postural Low Back Pain

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Summary
For adult scoliosis patients with chronic low back pain bracing is initially indicated before spinal surgery is considered. With a sagittal realignment brace (physio-logic™ brace) we can predict a successful outcome in this specific patient population.

Introduction
For adult scoliosis patients with chronic low back pain bracing is initially indicated before spinal surgery is considered. Until recently the effect upon pain reductions in the mid or long-term has not been reported upon. Promising results have been documented in short-term for the application of a sagittal re-alignment brace in patients with spinal deformities and suffering from pain; however mid-term or long-term results are not yet available. The purpose of this study is to investigate the mid-term effects of this brace with respect to pain control.

Methods
65 patients (56 females and 9 males) with chronic low back pain (> 24 months) and the diagnosis of scoliosis or kyphosis were treated with a sagittal realignment brace (physio-logic brace™) between January 2006 and July 2007. The indication for this kind of brace treatment was derived from a positive sagittal re-alignment test (SRT) and the restriction of no successful conservative treatment during the last 24 months. The aim of this intervention was to avoid surgery for chronic low back pain.

After the anthropometrical data (circumferential and longitudinal trunk measurements) are registered, the foam model is milled from a blank hard foam block. This hard foam model is wrapped in a heated PE-plate, which is vacuumed to the models surface. The brace parts are cut from the PE-model and adjusted to the patient [1].
Results
The average pain intensity on the Roland and Morris VRS (5 steps) before treatment was 3.3 (t1), at the time of brace adjustment 2.7 (t2) and after an average observation time of 18 months 2.0 (t3). The differences were highly significant in the Wilcoxon test.
A group of 21 patients were able to completely remove the brace after significant improvements of pain intensity were recorded (see table 2). In certain patients the symptoms of spinal claudication were also significantly reduced.

Conclusion
Contrary to unspecific orthoses, which after a short period are worn no longer, the sagittal realignment brace (physio-logic™ brace) leads to an effective reduction of pain intensity in midterm even in patients who have stopped brace treatment after the initial 6 months of treatment. Precondition for an appropriate brace application is that the pain is classified as being of postural origin.

References
Image: plneurom_None.jpg