



EXERCISE THERAPY FOR ADULT SCOLIOSIS

Physical therapists at Spinal Dynamics continually review journals for information about scoliosis. We are pleased to offer the following information regarding adult scoliosis and exercise therapy.

Our mission at Spinal Dynamics is to offer a personalized home program to assist our clients with self management and stabilization of their scoliosis curves.

We are happy to discuss clinical questions with physicians and other healthcare providers as well as prospective patients. Please contact us by phone at 414-302-0770 or by email at info@sdwpt.com

Reviewing the literature for information on Cobb angle progression in adults with Scoliosis

Progression of spinal curvature, as evidenced by the measurement of Cobb angle, in adults followed over a period of 3 to 40 years.

The numbers for adult progression are much more consistent than for children, with most studies reporting a range between sixty and sixty-nine percent of patients undergoing significant worsening during the period of observation, irrespective of curvature magnitude (see the following table). Edgar and Mehta (1988) reported that among seventy-seven adult patients followed for an average of 16.8 years most curvatures progressed, at an average rate of 1.3 degrees per year. Ascani *et al.* (1986) found that 100% of 187 adults had curvatures that progressed over the course of a thirty-year follow-up period. Spontaneous improvement has not been reported among 587 adult patients with scoliosis followed, without treatment, for periods of three to forty years (Ascani *et al.* 1986, Bjerkreim and Hassan 1982, Collis and Ponseti 1968, Edgar and Mehta 1988, Korovessis *et al.* 1994, Weinstein and Ponseti 1983, Weinstein 2000), or in any other studies of skeletally mature patients.

Table 1.3 - Incidence of curvature progression in scoliosis: adults

Study	No. of cases	Initial Cobb Angle	Incidence of progression
Ascani et al. 1986	187	<20 - >60	100%
Bjerkrein & Hassan 1982	70	10 - 154	60%
Collis & Ponseti 1968	134	<50 - >100	69%
Korovessis et al. 1994	91	>10	67%
Weinstein & Ponseti 1983	102	15 - 135	68%

Information from Scoliosis and the Human Spine, by Martha Hawes, PhD - West Press, 2003, page 25.



Information supporting exercise therapy for adults with scoliosis

There is proof that exercise can help adults with scoliosis on many levels. The following articles are supported by the International Society on Spinal Orthopaedic and Rehabilitation Treatment – SOSORT. Read them for more information on exercise treatment for adult scoliosis.

Adult scoliosis can be reduced through specific SEAS exercises: a case report

Negrini A, Parzini S, Negrini MG, Romano M, Atanasio S, Zaina F, and Negrini S – *Scoliosis* 2008, 3:20doi:10.1186/1748-7161-3-20 Published: 16 December 2008

Abstract (provisional)

Background

It has been known since many years that scoliosis can continue to progress after skeletal maturity: the rate of progression has shown to be linear, and it can be used to establish an individual prognosis. Once there is progression there is an indication for treatment: usually it is proposed a surgical one. There are very few papers on an alternative rehabilitation approach; since many years we propose specific SEAS exercises and the aim of this study is to present one case report on this approach.

Methods

Case report. All radiographs have been measured blindly twice using the same protractor by one expert physician whose repeatability error proved to be <3 degrees Cobb; the average measurement has been used.

Results

This case reports on a 25 years old female scoliosis patient, previously treated with Risser casts and Lyon braces from 14 (Risser 1) to 19 years of age with a decrease of the curve from 46 degrees to 37 degrees. She showed in adulthood a progression of 10 degrees Cobb in 6 years. Consequently, the patient has then been treated with SEAS exercises, and in one year progression has been reverted from 47 degrees to 28.5 degrees.

Conclusions

A scoliosis curve is made of different components: the structural bony and ligamentous components, and a postural one that counts up to 9 degrees in children, while it has not been quantified in adults. This case shows that when adult scoliosis aggravates it is possible to intervene with specific exercises (SEAS) not just to get stability, but to recover last years collapse. The reduction of scoliotic curve through rehabilitation presumably does not indicate a reduction of the bone deformity, but rely on a recovery of the upright postural collapse. This reduction can decrease the chronic asymmetric load on the spine and, in the long run, reduce the risks of progression.