



## ADULT WOMEN / PREGNANT WOMEN WITH SCOLIOSIS: WHAT DOES THE RESEARCH SAY?

*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](mailto:info@sdwpt.com)*

### Childbearing, Curve Progression, and Sexual Function in Women 22 Years After Treatment for Adolescent Idiopathic Scoliosis: A Case-Control Study

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Spine: 1 July 2001 – Volume 26 – Issue 13 – pp 1449-1458

Study Design: A consecutive series of female patients with adolescent idiopathic scoliosis treated between 1968 and 1977, either with distraction and fusion using Harrington rods (n = 145) or with a brace (n = 122), were followed for at least 20 years after completion of the treatment.

Objectives: To determine the long-term outcomes of childbearing and sexual life in women treated for adolescent idiopathic scoliosis, as compared with matched control subjects who did not have scoliosis.

Summary of Background Data: The effect of pregnancy on curve progression is not established, and results are contradictory. Few reports exist on the social life (marriage, childbearing, and sexual function) of formerly treated individuals with scoliosis.

Methods: In this study, 136 surgically treated women (94%) and 111 brace-treated women (91%) completed the Scoliosis Research Society (SRS)/MODEM's questionnaire concerning childbearing and sexual life as a part of an unbiased personal follow-up examination. Of these, 129 surgically treated and 105 brace-treated women also underwent a radiographic examination. The Cobb method was used to measure curve size in present and earlier examinations. An age-matched control group of 90 women was randomly selected and subjected to the same examinations.

Results: The mean age for all the groups was 40 years. Of the surgically treated and brace-treated women, 85% were or had been married, as compared with 82% of the control women. In the total cohort, 628 pregnancies had occurred. No significant mean difference existed between the groups in the number of children born (1.8 for the surgically treated, 1.9 for the brace-treated, and 2 for the control women) ( $P = 0.25$ ). The patients in the brace-treated group had a significantly higher mean age at first pregnancy (28 years) than the control subjects (25.9 years) ( $P = 0.011$ ), whereas the age for the surgically treated women (26.6 years) did not differ significantly from that for the brace-treated women. There were no significant differences between the groups in rates for low back pain (35% for the surgically treated, 43% for the brace-treated, and 28% for the control group) or for cesarean section (19% for the surgically treated, 14% for the brace-treated, and 18% for the control group) during the first pregnancy. The rate of vacuum extractions was higher in the surgically treated group (16%) than in the control group (5%) ( $P = 0.036$ ) or the brace-treated group (8%). Limitation of sexual function from the back was admitted by 33% of the surgically treated, 28% of the brace-treated and 15% of the control women: surgically treated vs. control subjects ( $P = 0.0042$ ), brace-treated vs. control subjects ( $P = 0.026$ ), and brace-treated vs. surgically treated subjects ( $P = 0.57$ , a non-significant difference). These limitations were largely because of difficulties participating physically in activities or self-consciousness about appearance. Pain was a minor reason for limitation. There was no correlation between progression of the major or lumbar curve and number of pregnancies, or between curve progression and age at first pregnancy.

Conclusions: Patients treated for adolescent idiopathic scoliosis appeared to function well with regard to marital status and number of children. The scoliotic curve did not seem to increase as a result of childbearing. Minor problems occurred during pregnancy and delivery. Some patients, however, experienced a slight negative effect in their sexual life.



## How do scoliotic women shrink throughout life?

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Spine: 2009 Mar 15; 34(6):598-602.

Study Design: Cross-sectional study among a population of scoliotic and non-scoliotic women aged 40 years or more with low back pain from a spine rehabilitation unit. **OBJECTIVES**: (1) To test the hypothesis that scoliotic (SW) women shrink faster than non-scoliotic women (NSW) in adulthood. (2) To investigate the effects of age and curve progression in the scoliotic group, and to develop a model to assess the natural history of scoliosis and shrinkage.

Summary of Background Data: Little is known about the decrease in body height in adult scoliotic patients. A simple method to help predict the future course of the curvature in patients without radiograph follow-up could help clinicians make treatment decisions.

Methods: Sixty SW and 40 NSW women matched for age, with no history of vertebral fracture or osteoporosis, were questioned about their peak body height and measured. Total spine radiographs were performed, and compared with previous images if available. Correlations between self-reported peak body height and current height, shrinkage, age, time since menopause, and the Cobb angle were searched for. In women with documented radiograph follow-up, correlations between shrinkage and progression of the Cobb angle were sought to develop a predictive model of curve progression.

Results: Average shrinkage in the SW was twice that in the NSW (5.1 +/- 3.5 vs. 2.3 +/- 0.7 cm,  $P < 0.001$ ), had begun early in adulthood, was due to the combined effect of age and scoliosis, and was strongly associated with rotatoryolisthesis. In the 17 women with radiograph follow-up (19.7 +/- 7.3 years), curve progression was closely related to shrinkage ( $r = 0.74$ ;  $P < 0.001$ ;  $y = 0.7 + 2.7x$ ;  $SE = 0.42$ ). This allowed us to generate prediction limits of the scoliosis for a given individual.

Conclusion: Determination of shrinkage could provide a simple, noninvasive, and cheap method to monitor the natural history of scoliosis in adults. It could therefore be used in routine clinical practice to help make treatment decisions for patients with no documented radiograph follow-up.

## Related articles:

### Reproductive outcomes in scoliosis patients

Visscher W, Lonstein JE, Hoffman DA, Mandel JS, Harris BS 3rd.

Spine: 1988 Oct; 13(10):1096-8

### Pregnancy in thoracic scoliosis

Siegler D, Zorab PA

Br J Dis Chest: 1981 Oct; 75(4):367-70

### Pregnancy and delivery in patients operated by the Harrington rod method for idiopathic scoliosis

Orvomaa E, Hiilesmaa V, Poussa M, Snellman O, Tallroth K.

Eur Spine J: 1997; 6(5):304-7